

## **Reference for checking if a power supply is hooked up to Snake and Rotator Magnets correctly by using signals on the quench detection pages**

- **Read pet page procedure on page 2 first.**
- **If you want to use q.d. slow logs see the procedure starting on page 35.**
- **The pet page procedure is the recommended way to go if you can ramp the p.s.'s.**

### **Quench Detector Pet Pages**

<b>Alcove 3c.....</b>	<b>Page 3</b>
<b>Alcove 5c.....</b>	<b>Page 10</b>
<b>Alcove 7a.....</b>	<b>Page 15</b>
<b>Alcove 7c.....</b>	<b>Page 20</b>
<b>Alcove 9a.....</b>	<b>Page 25</b>
<b>Alcove 9c.....</b>	<b>Page 30</b>

## **Procedure for Polarity Checking using pet page (gas cooled leads)**

- 1) Bring up the quench detector page you need.
- 2) The first thing you must do is make sure the slow log is set to 1 minute. This is a box on the left hand side of the qd page under the words “Operating Mode”. Click on the box under “Operating Mode” and select “slog 1m”. See page 4. If it is already set to 1 minute you don’t have to do anything with this. Make sure every qd page you work with has this set to 1 minute.
- 3) Ramp only one power supply at a time. So if you are working on bo3-snk7-1.4 and bo3-snk7-2.3 start with bo3-snk7-1.4 and ramp it by itself. Five amps should be enough but the pictures that follow show real operating currents on the qd pet pages.
- 4) On page 4 you can see the current circled on the left hand side and the gas cooled leads circled on the right hand side. **You can look at the –ps or –psd for the current signal. They are both the same.** When you are ramping up to 5 amps with bo3-snk7-1.4 you should see:
  - a. the B1 and R1 gas cooled leads are opposite sign but equal and increasing only as you are ramping up in current.
  - b. the B4 and R4 gas cooled leads are opposite sign but equal and increasing only as you are ramping up in current.
  - c. **the polarity of the gas cooled leads should be just as shown on page 4 and then you know the polarity is correct.** If you see there is a wrong polarity or the gas cooled leads are not opposite as they should be there is a problem.
- 5) If this was a 2.3 p.s. then:
  - a. B2 and R2 gas cooled leads should always be opposite sign but equal and increasing only as you are ramping up in current.
  - b. B3 and R3 gas cooled leads should always be opposite sign but equal and increasing only as you are ramping up in current.
- 6) When you ramp down the p.s. the gas cooled leads should follow, check this too.
- 7) You should also watch that the voltage on the gas cooled leads are not slowly, or quickly, drifting up, when you are sitting at a fixed current. This could indicate a lead flow problem. If the flow is low the voltage would climb and eventually the qd would trip out the p.s.

## **Procedure for Coil Voltage Tap Checkout using pet page**

- 1) Again, let’s use bo3-snk7-1.4 as an example so bring up the quench detector page for this snake p.s. **MAKE SURE SLOW LOGS = 1MIN.**
- 2) Ramp only one power supply at a time. So if you are working on bo3-snk7-1.4 and bo3-snk7-2.3. Start with bo3-snk7-1.4 and ramp it by itself. Five amps should be enough but the pictures that follow show operating currents.
- 3) See page 5 and page 6. You need to look at the 4 coil voltage taps in the red square on page 5. You also need to look at the difference coils in the red square on page 6. When you are ramping up THE BI9-SNK7-1.4 to 5 amps BY ITSELF this is what you look for
  - a. You should see the 2 inner coils (...ICVT) ramp up and be equal to each other (see page 5 for real names).
  - b. The 2 outer coils (...OCVT) should ramp up and be equal to each other (see page 5 for real names).
  - c. Both the ICVT’s and the OCVT’s should be close to zero when the  $di/dt=0$  (as shown now on page 5).
  - d. On page 6 you will see a square box around the 4 difference coils (IC-OC). When you are ramping up to 5 amps, or sitting at a fixed current, or ramping down, you should see these difference coils are always close to zero. Close to zero means less than 40mV.
- 4) When you ramp the p.s. down this is what you should look for:
  - a. You should see the 2 inner coils (...ICVT) ramp down and be equal to each other.
  - b. The 2 outer coils (...OCVT) should ramp down and be equal to each other.
  - c. Both the ICVT’s and the OCVT’s should be close to zero when the  $di/dt=0$ .
  - d. On page 6 you will see a square box around the 4 difference coils (IC-OC). When you are ramping up to 5 amps, or sitting at a fixed current, or ramping down, you should see these difference coils are always close to zero. Close to zero means less than 40mV.

# **ALCOVE 3C-SNAKES**

## POLARITY CHECKOUT

Quench/cfe-3c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 10:56:20 :cfe-3c-qd1 DSP Version :217.04 ADO Version :0423.04

1.11p: / Oct 11 2004 / 15:12:

QD Status ---> :Running QD Command DataCommand Missed HB Permit

Blue Ring :Running Quench Mode (Seconds) Trippe

Yellow Ring :Running Quench Mode 0 0 Trippe

Aux Circuit ---> :Running 1 60Hz

<--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

1	B03SNK7_1ICVT (B03SNK7-1.4D)	-0.0009	Volts	11	B03SNK7B1_GL (B03SNK7-1.4)	28.2329	mVolts
2	B03SNK7_10CVT (B03SNK7-1.4D)	-0.0006	Volts	12	B03SNK7R1_GL (B03SNK7-1.4)	-27.8517	mVolts
3	B03SNK7_4ICVT (B03SNK7-1.4D)	0.0001	Volts	13	B03SNK7B4_GL (B03SNK7-1.4)	-42.8082	mVolts
4	B03SNK7_40CVT (B03SNK7-1.4D)	-0.0004	Volts	14	B03SNK7R4_GL (B03SNK7-1.4)	42.2743	mVolts
5	B03SNK7_1IC-10C (B03SNK7-1.4D)	-0.0005	Volts	15	3SNAKE-CAL1	3.0000	_
6	B03SNK7_4IC-40C (B03SNK7-1.4D)	0.0006	Volts	16			
7	B03SNK7_1IC-4IC (B03SNK7-1.4D)	-0.0009	Volts	17			
8	B03SNK7_10C-40C (B03SNK7-1.4D)	-0.0003	Volts	18			
9	B03SNK7-1.4-PS (B03SNK7-1.4)	100.0514	Amps	19			
10	B03SNK7-1.4-PSD (B03SNK7-1.4D)	100.0514	Amps	20			

Operating Mode :AUAU1

Slog 1m Record 796

05/04/2005 11:34:15 Err Last Reset

Times 1.578 1.190 1.387

Sys 05/06/2005 09:35:11 rtdl > 1500

ADC [0 0 0 0 0 0]

Cal Auto Zero On Sext Adapt Off

DSP Miss 720 FEC No 720

(Counts) (Seconds)

Before you start make sure slow log is set to 1 minute as is shown here.

Current right now.

Voltage and POLARITY of gas cooled leads at this current. If the polarity you see, in real time, matches this polarity then the p.s. leads are hooked up correctly to the magnet.

## Coil Voltage Tap Checkout – continued on next page

Quench/cfe-3c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 10:56:20 :cfe-3c-qd1 :DSP Version :217.04 ADO Version :0423.04

1.11p: / Oct 11 2004 / 15:12:

QD Status ---> :Running QD Command DataCommand Missed HB Permit

Blue Ring :Running Quench Mode (Seconds) Trippe

Yellow Ring :Running Quench Mode 0 0 Trippe

Aux Circuit ---> :Running 1 60Hz

<--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

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3	B03SNK7_4ICVT (B03SNK7-1.4D)	0.0001	Volts	13	B03SNK7B4_GL (B03SNK7-1.4)	-42.8082	mVolts
4	B03SNK7_40CVT (B03SNK7-1.4D)	-0.0004	Volts	14	B03SNK7R4_GL (B03SNK7-1.4)	42.2743	mVolts
5	B03SNK7_1IC-10C (B03SNK7-1.4D)	-0.0005	Volts	15	3SNAKE-CAL1	3.0000	_
6	B03SNK7_4IC-40C (B03SNK7-1.4D)	0.0006	Volts	16			
7	B03SNK7_1IC-4IC (B03SNK7-1.4D)	-0.0009	Volts	17			
8	B03SNK7_10C-40C (B03SNK7-1.4D)	-0.0003	Volts	18			
9	B03SNK7-1.4-PS (B03SNK7-1.4)	100.0514	Amps	19			
10	B03SNK7-1.4-PSD (B03SNK7-1.4)	100.0514	Amps	20			

Operating Mode :AUAU1

Slog 1m Record # 796

05/04/2005 11:34:15 Err Last Reset

Times 1.578 1.190 1.387

Sys 05/06/2005 09:35:11 rtdl > 1500

ADC [0 0 0 0 0 0]

Cal Auto Zero On :Sext Adapt Off

DSP Miss 720 FEC No 720

(Counts) (Seconds)

0 0

Four Coil Voltage taps to look at. When you are ramping up the 1.4 by itself you should see the 2 IC's ramp up and be equal. The 2 OC's should ramp up and be equal. Both the IC's and the OC's should be close to zero when the  $di/dt=0$ . When you ramp the p.s. down you should see the 2 IC's ramp down and be equal. The 2 OC's should ramp down and be equal. Both the IC's and the OC's should be close to zero when the  $di/dt=0$ .

This is the current you watch when ramping up. Going up to 5amps is enough.

## Coil Voltage Tap Checkout

Quench/cfe-3c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 10:56:20 :cfe-3c-qd1 DSP Version :217.04 ADO Version :0423.04

1.11p: / Oct 11 2004 / 15:12:

QD Status ---> :Running QD Command DataCommand Missed HB Permit

Blue Ring :Running Quench Mode (Seconds) Trippe

Yellow Ring :Running Quench Mode 0 0 Trippe

Aux Circuit ---> :Running 1 60Hz

<--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

1	B03SNK7_1ICVT (B03SNK7-1.4D)	-0.0009	Volts	11	B03SNK7B1_GL (B03SNK7-1.4)	28.2329	mVolts
2	B03SNK7_10CVT (B03SNK7-1.4D)	-0.0006	Volts	12	B03SNK7R1_GL (B03SNK7-1.4)	-27.8517	mVolts
3	B03SNK7_4ICVT (B03SNK7-1.4D)	0.0001	Volts	13	B03SNK7B4_GL (B03SNK7-1.4)	-42.8082	mVolts
4	B03SNK7_40CVT (B03SNK7-1.4D)	-0.0004	Volts	14	B03SNK7R4_GL (B03SNK7-1.4)	42.2743	mVolts
5	B03SNK7_1IC-10C (B03SNK7-1.4D)	-0.0005	Volts	15	3SNAKE-CAL1	3.0000	_
6	B03SNK7_4IC-40C (B03SNK7-1.4D)	0.0006	Volts	16			
7	B03SNK7_1IC-4IC (B03SNK7-1.4D)	-0.0009	Volts	17			
8	B03SNK7_10C-40C (B03SNK7-1.4D)	-0.0003	Volts	18			
9	B03SNK7-1.4-PS (B03SNK7-1.4)	100.0514	Amps	19			
10	B03SNK7-1.4-PSD (B03SNK7-1.4)	100.0514	Amps	20			

Operating Mode :AUAU1

Slog 1m Record # 796

05/04/2005 11:34:15 Err Last Reset

Times 1.578 1.190 1.387

Sys 05/06/2005 09:35:11 rtdl > 1500

ADC [0 0 0 0 0 0]

Cal Auto Zero On :Sext Adapt Off

DSP Miss 720 FEC No 720

(Counts) (Seconds)

0 0

Four Difference Coils to look at. These should always be 40mV or less when you are ramping and even when you are not ramping.

This is the current you watch when ramping up. Going up to 5amps is enough. The -PS and -PSD signals are the same. Use either one.

## Bo3-snk7-2.3-ps

Quench/cfe-3c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 10:58:47 cfe-3c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 2 Select Page

Pg Dn Signal Name

1	B03SNK7_2ICVT (B03SNK7-2.3D)	-0.0016	Volts
2	B03SNK7_20CVT (B03SNK7-2.3D)	-0.0019	Volts
3	B03SNK7_3ICVT (B03SNK7-2.3D)	-0.0015	Volts
4	B03SNK7_30CVT (B03SNK7-2.3D)	-0.0016	Volts
5	B03SNK7_2IC-20C (B03SNK7-2.3D)	-0.0004	Volts
6	B03SNK7_3IC-30C (B03SNK7-2.3D)	0.0002	Volts
7	B03SNK7_2IC-3IC (B03SNK7-2.3D)	-0.0003	Volts
8	B03SNK7_20C-30C (B03SNK7-2.3D)	0.0002	Volts
9	B03SNK7-2.3-PS (B03SNK7-2.3)	323.1708	Amps
10	B03SNK7-2.3-PSD (B03SNK7-2.3D)	323.1708	Amps
11	B03SNK7B2_GL (B03SNK7-2.3)	-96.4017	mVolts
12	B03SNK7R2_GL (B03SNK7-2.3)	98.4758	mVolts
13	B03SNK7B3_GL (B03SNK7-2.3)	145.5086	mVolts
14	B03SNK7R3_GL (B03SNK7-2.3)	-147.3720	mVolts
15			
16			
17			
18			
19			
20			

Operating Mode AUQU11

Slog 1m Record # 798

05/04/2005 11:34:15 Err Last Reset

Times 1.596 1.177 1.389

Sys 05/06/2005 09:35:11 rtd1 > 1500

ADC [0 0 0 0 0 0]

Cal Auto Zero On Sext Adapt Off

DSP Miss 720 FEC No 720

(Counts) (Seconds)

0 0

**yi3-snk7-1.4-ps**

The screenshot displays the Quench-3c-qd1 software interface. At the top, the title bar reads "Quench-3c-qd1". Below it, a menu bar includes "Page", "PPM", "Device", "Data", "Tools", "Buffer", and "Help".

The main display area is divided into several sections:

- Top Section:** Shows the date and time "05/06/2005 11:00:11", the device name "cfe-3c-qd1", the DSP Version "217.04", and the ADO Version "0423.04".
- Left Column:** Displays the "QD Status" as "Running", and the status of "Blue Ring", "Yellow Ring", and "Aux Circuit", all of which are also "Running". Below this, there is a "Pg Up" button and a "Select Page" dropdown menu showing "3".
- Right Column:** Shows the "QD Command" and "DataCommand" fields, both empty. It also displays "Missed HB Permit (Seconds)" as "0" and "Trippe" as "0".
- Signal Data Table:** A table with two columns: "Signal Name" and "Signal Value". The table lists various signals and their corresponding values. The signals are:
  - YI3SNK7\_1ICVT (YI3SNK7-1.4D): -0.0006 Volts
  - YI3SNK7\_10CVT (YI3SNK7-1.4D): 0.0005 Volts
  - YI3SNK7\_4ICVT (YI3SNK7-1.4D): 0.0005 Volts
  - YI3SNK7\_40CVT (YI3SNK7-1.4D): 0.0002 Volts
  - YI3SNK7\_1IC-10C (YI3SNK7-1.4D): -0.0012 Volts
  - YI3SNK7\_4IC-40C (YI3SNK7-1.4D): 0.0002 Volts
  - YI3SNK7\_1IC-4IC (YI3SNK7-1.4D): -0.0012 Volts
  - YI3SNK7\_10C-40C (YI3SNK7-1.4D): -0.0004 Volts
  - YI3SNK7-1.4-PS (YI3SNK7-1.4): 97.8620 Amps
  - YI3SNK7-1.4-PSD (YI3SNK7-1.4D): 97.8620 Amps
  - YI3SNK7B1\_GL (YI3SNK7-1.4): 40.2128 mVolts
  - YI3SNK7R1\_GL (YI3SNK7-1.4): -40.5256 mVolts
  - YI3SNK7B4\_GL (YI3SNK7-1.4): -37.2262 mVolts
  - YI3SNK7R4\_GL (YI3SNK7-1.4): 36.3771 mVolts
- Bottom Section:** Shows the "Operating Mode" as "AUAU1", the "Slog 1m" button, the "Record # 800", the "Err Last Reset" button, the "DSP Miss 720", and the "FEC No 720". It also displays the "Times" as "1.596" and "1.177", the "Sys" as "05/06/2005 09:35:11", the "ADC" as "rtd1 > 1500", and the "Cal" as "Auto Zero On" and "Sext Adapt Off".



# yi3-snk7-2.3-ps

Quench/cfe-3c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:25:37 cfe-3c-qd1 DSP Version 217.04 ADO Version 0423.04  
1.11p: / Oct 11 2004 / 15:12:

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up  
4 Select Page

Pg Dn Signal Name

1	YI3SNK7_2ICVT (YI3SNK7-2.3D)	-0.0010	Volts
2	YI3SNK7_20CVT (YI3SNK7-2.3D)	-0.0003	Volts
3	YI3SNK7_3ICVT (YI3SNK7-2.3D)	-0.0009	Volts
4	YI3SNK7_30CVT (YI3SNK7-2.3D)	-0.0012	Volts
5	YI3SNK7_2IC-20C (YI3SNK7-2.3D)	-0.0007	Volts
6	YI3SNK7_3IC-30C (YI3SNK7-2.3D)	-0.0001	Volts
7	YI3SNK7_2IC-3IC (YI3SNK7-2.3D)	-0.0001	Volts
8	YI3SNK7_20C-30C (YI3SNK7-2.3D)	0.0006	Volts
9	YI3SNK7-2.3-PS (YI3SNK7-2.3)	322.7274	Amps
10	YI3SNK7-2.3-PSD (YI3SNK7-2.3D)	322.7274	Amps

Operating Mode AUAU1

Slog 1m Record # 825  
05/04/2005 11:34:15 Err Last Reset  
Times 1.606 1.156 1.383  
Sys 05/06/2005 09:35:11 rtdl > 1500  
ADC [0 0 0 0 0 0  
Cal Auto Zero On Sext Adapt Off

Signal Name  
Signal Name  
11 YI3SNK7B2\_GL (YI3SNK7-2.3) -145.1478 mVolts  
12 YI3SNK7R2\_GL (YI3SNK7-2.3) 152.6437 mVolts  
13 YI3SNK7B3\_GL (YI3SNK7-2.3) 131.4443 mVolts  
14 YI3SNK7R3\_GL (YI3SNK7-2.3) -130.9081 mVolts  
15  
16  
17  
18  
19  
20

DSP Miss 720 FEC No 720  
(Counts) (Seconds)  
0 0

# **ALCOVE 5C-ROTATORS**

bi5-rot3-1.4-ps

Quench/cfe-5c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:28:38 cfe-5c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:1

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz

<--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

1	BI5ROT3_1ICVT (BI5ROT3-1.4D)	0.0013	Volts	11	BI5ROT3B1_GL (BI5ROT3-1.4)	-59.7297	Volts
2	BI5ROT3_1OCVT (BI5ROT3-1.4D)	0.0008	Volts	12	BI5ROT3R1_GL (BI5ROT3-1.4)	60.8429	mVolts
3	BI5ROT3_4ICVT (BI5ROT3-1.4D)	0.0009	Volts	13	BI5ROT3B4_GL (BI5ROT3-1.4)	59.2796	mVolts
4	BI5ROT3_4OCVT (BI5ROT3-1.4D)	0.0014	Volts	14	BI5ROT3R4_GL (BI5ROT3-1.4)	-59.2213	mVolts
5	BI5ROT3_1IC-10C (BI5ROT3-1.4D)	0.0002	Volts	15	5_ROT3-CAL1	-20.0000	_
6	BI5ROT3_4IC-40C (BI5ROT3-1.4D)	0.0005	Volts	16			
7	BI5ROT3_1IC-4IC (BI5ROT3-1.4D)	0.0001	Volts	17			
8	BI5ROT3_1OC-40C (BI5ROT3-1.4D)	0.0004	Volts	18			
9	BI5ROT3-1.4-PS (BI5ROT3-1.4)	220.9672	Amps	19			
10	BI5ROT3-1.4-PSD (BI5ROT3-1.4D)	220.9672	Amps	20			

Operating Mode AUAU1

Slog 1m Record # 825

05/06/2005 01:46:55 Err Last Reset DSP Miss 720 FEC No 720

(8.2) qddisplay.5c-qd1:upPetPage Nudge: 0 3

bi5-rot3-2.3-ps

Quench/cfe-5c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:29:27 cfe-5c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:1

QD Status ---> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 1 60Hz

Aux Circuit ---> <--def dump

Pg Up 2 Select Page

Pg Dn Signal Name

1	BI5R0T3_2ICVT (BI5R0T3-2.3D)	0.0008	Volts	11	BI5R0T3B2_GL (BI5R0T3-2.3)	46.2066 mVolts
2	BI5R0T3_20CVT (BI5R0T3-2.3D)	0.0012	Volts	12	BI5R0T3R2_GL (BI5R0T3-2.3)	-47.0456 mVolts
3	BI5R0T3_3ICVT (BI5R0T3-2.3D)	0.0016	Volts	13	BI5R0T3B3_GL (BI5R0T3-2.3)	-46.0314 mVolts
4	BI5R0T3_30CVT (BI5R0T3-2.3D)	0.0013	Volts	14	BI5R0T3R3_GL (BI5R0T3-2.3)	44.3968 mVolts
5	BI5R0T3_2IC-20C (BI5R0T3-2.3D)	-0.0001	Volts	15		
6	BI5R0T3_3IC-30C (BI5R0T3-2.3D)	0.0015	Volts	16		
7	BI5R0T3_2IC-3IC (BI5R0T3-2.3D)	-0.0007	Volts	17		
8	BI5R0T3_20C-30C (BI5R0T3-2.3D)	0.0006	Volts	18		
9	BI5R0T3-2.3-PS (BI5R0T3-2.3)	170.2548	Amps	19		
10	BI5R0T3-2.3-PSD (BI5R0T3-2.3)	170.2329	Amps	20		

Operating Mode AUA01

Slog 1m Record # 826

05/06/2005 01:46:55 Err Last Reset DSP Miss 720 FEC No 720

(8,2) qddisplay.5c-qd1:upPetPage Nudge: 0 57

# yo5-rot3-1.4-ps

Quench/cfe-5c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:32:15 cfe-5c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:1

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 3 Select Page  
Pg Dn Signal Name

1	Y05ROT3_1ICVT (Y05ROT3-1.4D)	0.0010	Volts
2	Y05ROT3_10CVT (Y05ROT3-1.4D)	0.0010	Volts
3	Y05ROT3_4ICVT (Y05ROT3-1.4D)	0.0007	Volts
4	Y05ROT3_40CVT (Y05ROT3-1.4D)	0.0011	Volts
5	Y05ROT3_1IC-10C (Y05ROT3-1.4D)	0.0007	Volts
6	Y05ROT3_4IC-40C (Y05ROT3-1.4D)	-0.0005	Volts
7	Y05ROT3_1IC-4IC (Y05ROT3-1.4D)	0.0005	Volts
8	Y05ROT3_10C-40C (Y05ROT3-1.4D)	-0.0003	Volts
9	Y05ROT3-1.4-PS (Y05ROT3-1.4)	217.8506	Amps
10	Y05ROT3-1.4-PSD (Y05ROT3-1.4D)	217.8506	Amps

Operating Mode AUAU1

Slog 1m Record # 829

05/06/2005 01:46:55 Err Last Reset DSP Miss 720 FEC No 720

Signal	
Signal Name	
11	Y05ROT3B1_GL (Y05ROT3-1.4) -40.5205 mVolts
12	Y05ROT3R1_GL (Y05ROT3-1.4) 42.7929 mVolts
13	Y05ROT3B4_GL (Y05ROT3-1.4) 74.2947 mVolts
14	Y05ROT3R4_GL (Y05ROT3-1.4) -72.5256 mVolts
15	
16	
17	
18	
19	
20	

(8.2) qddisplay.5c-qd1:upPetPage Nudge: 0 555

The screenshot displays the Qench/cfe-5c-ql1 interface. At the top, the title bar reads "Qench/cfe-5c-ql1". Below it, a menu bar includes "Page", "PPM", "Device", "Data", "Tools", "Buffer", and "Help".

The main display area is divided into several sections:

- Top Left:** Shows the date and time "05/06/2005 11:32:58", the device name "cfe-5c-ql1", and the "DSP Version 217.04".
- Top Right:** Shows the "AD0 Version 0423.04".
- Middle Left:** Displays "QD Status" as "Running", "Blue Ring" as "Running", and "Yellow Ring" as "Running". It also shows "Aux Circuit" as "Running".
- Middle Right:** Displays "QD Command" as "Quench Mode", "DataCommand" as "Quench Mode", and "Missed HB Permit (Seconds)" as "0".
- Bottom Left:** Shows "Slog 1m" and "Record # 829".
- Bottom Right:** Shows "DSP Miss 720" and "FEC No 720".

A table of signals is displayed in the center. The table has two columns: "Signal Name" and "Signal". The signals are listed as follows:

Signal Name	Signal
Y05R0T3_21CVT (Y05R0T3-2.3D)	0.0009 Volts
Y05R0T3_20CVT (Y05R0T3-2.3D)	0.0010 Volts
Y05R0T3_31CVT (Y05R0T3-2.3D)	0.0014 Volts
Y05R0T3_30CVT (Y05R0T3-2.3D)	0.0013 Volts
Y05R0T3_21C-20C (Y05R0T3-2.3D)	0.0004 Volts
Y05R0T3_31C-30C (Y05R0T3-2.3D)	0.0013 Volts
Y05R0T3_21C-31C (Y05R0T3-2.3D)	-0.0009 Volts
Y05R0T3_20C-30C (Y05R0T3-2.3D)	-0.0006 Volts
Y05R0T3-2.3-PS (Y05R0T3-2.3D)	177.3996 Amps
Y05R0T3-2.3-PSD (Y05R0T3-2.3D)	177.3996 Amps

A red circle highlights the signals from Y05R0T3B2\_GL to Y05R0T3R3\_GL, which are listed in the "Signal" column with their corresponding values in mVolts.

# **ALCOVE 7A-ROTATORS**

## Bo6-rot3-1.4-ps

Quench/cfe-7a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:35:07 cfe-7a-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ----> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 1 60Hz

Aux Circuit ----> Running

<--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

1	B06ROT3_1ICVT (B06ROT3-1.4D)	0.0002	Volts	11	B06ROT3B1_GL (B06ROT3-1.4)	-41.1306	Volts
2	B06ROT3_10CVT (B06ROT3-1.4D)	0.0014	Volts	12	B06ROT3R1_GL (B06ROT3-1.4)	39.3766	Volts
3	B06ROT3_4ICVT (B06ROT3-1.4D)	-0.0006	Volts	13	B06ROT3B4_GL (B06ROT3-1.4)	70.6674	Volts
4	B06ROT3_40CVT (B06ROT3-1.4D)	-0.0006	Volts	14	B06ROT3R4_GL (B06ROT3-1.4)	-69.1729	Volts
5	B06ROT3_1IC-10C (B06ROT3-1.4D)	-0.0009	Volts	15	6_ROT-CAL1	-37.0000	_
6	B06ROT3_4IC-40C (B06ROT3-1.4D)	-0.0005	Volts	16			
7	B06ROT3_1IC-4IC (B06ROT3-1.4D)	0.0007	Volts	17			
8	B06ROT3_10C-40C (B06ROT3-1.4D)	0.0011	Volts	18			
9	B06ROT3-1.4-PS (B06ROT3-1.4)	210.0011	Amps	19			
10	B06ROT3-1.4-PSD (B06ROT3-1.4)	219.0011	Amps	20			

Operating Mode AUAU1

Slog 1m Record # 830

05/06/2005 01:30:40 Err Last Reset DSP Miss 720 FEC No 720



# bo6-rot3-2.3-ps

Quench/cfe-7a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:37:29 cfe-7a-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 1 60Hz

Aux Circuit ---> Running

<--def dump

Pg Up 2 Select Page

Pg Dn Signal Name

Signal	Signal Name	Value	Unit
1	B06ROT3_2ICVT (B06ROT3-2.3D)	0.0000	Volts
2	B06ROT3_20CVT (B06ROT3-2.3D)	-0.0003	Volts
3	B06ROT3_3ICVT (B06ROT3-2.3D)	-0.0008	Volts
4	B06ROT3_30CVT (B06ROT3-2.3D)	-0.0009	Volts
5	B06ROT3_2IC-20C (B06ROT3-2.3D)	0.0004	Volts
6	B06ROT3_3IC-30C (B06ROT3-2.3D)	-0.0009	Volts
7	B06ROT3_2IC-3IC (B06ROT3-2.3D)	0.0012	Volts
8	B06ROT3_20C-30C (B06ROT3-2.3D)	0.0003	Volts
9	B06ROT3-2.3-PC (B06ROT3-2.3)	168.4249	Amps
10	B06ROT3-2.3-PSD (B06ROT3-2.3D)	168.4249	Amps
11	B06ROT3B2_GL (B06ROT3-2.3)	31.7153	Volts
12	B06ROT3R2_GL (B06ROT3-2.3)	-31.3011	Volts
13	B06ROT3B3_GL (B06ROT3-2.3)	-53.1411	Volts
14	B06ROT3R3_GL (B06ROT3-2.3)	52.4521	Volts
15			
16			
17			
18			
19			
20			

Operating Mode H0H01

Slog 1m Record # 832

05/06/2005 01:30:40 Err Last Reset DSP Miss 720 FEC No 720

(8,2) qddisplay.7a-qd1:upPetPage Nudge: 0 633

# yi6-rot3-1.4-ps

Quench/cfe-7a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:38:13 cfe-7a-qd1 DSP Version 217.04 ADO Version 0423.04  
1.11p: / Oct 11 2004 / 15:12:18  
QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pgm Up  
3 Select Page  
Pgm Dn  
Signal Name

1	YI6ROT3_11CVT (YI6ROT3-1.4D)	0.0013	Volts	11	YI6ROT3B1_GL (YI6ROT3-1.4)	-78.3644 mVolts
2	YI6ROT3_10CVT (YI6ROT3-1.4D)	0.0015	Volts	12	YI6ROT3R1_GL (YI6ROT3-1.4)	81.5289 mVolts
3	YI6ROT3_41CVT (YI6ROT3-1.4D)	-0.0002	Volts	13	YI6ROT3B4_GL (YI6ROT3-1.4)	61.8444 mVolts
4	YI6ROT3_40CVT (YI6ROT3-1.4D)	-0.0006	Volts	14	YI6ROT3R4_GL (YI6ROT3-1.4)	-58.3672 mVolts
5	YI6ROT3_11C-10C (YI6ROT3-1.4D)	0.0004	Volts	15		
6	YI6ROT3_41C-40C (YI6ROT3-1.4D)	0.0000	Volts	16		
7	YI6ROT3_11C-41C (YI6ROT3-1.4D)	0.0015	Volts	17		
8	YI6ROT3_10C-40C (YI6ROT3-1.4D)	0.0022	Volts	18		
9	YI6ROT3-1.4-PS (YI6ROT3-1.4)	211.1118	Amps	19		
10	YI6ROT3-1.4-PSD (YI6ROT3-1.4)	211.1118	Amps	20		

Operating Mode AUAU1  
Slog 1m Record # 833  
05/06/2005 01:30:40 Err Last Reset DSP Miss 720 FEC No 720

# yi6-rot3-2.3-ps

Quench/cfe-7a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:38:47 cfe-7a-qd1 DSP Version 217.04 ADO Version 0423.04  
1.11p; / Oct 11 2004 / 15:12:18  
QD Status ----> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ----> Running 1 60Hz  
<--def dump

Pg Up 4 Select Page  
Pg Dn Signal Name  
1 YI6ROT3\_2ICVT (YI6ROT3-2.3D) -0.0009 Volts  
2 YI6ROT3\_20CVT (YI6ROT3-2.3D) -0.0002 Volts  
3 YI6ROT3\_3ICVT (YI6ROT3-2.3D) -0.0010 Volts  
4 YI6ROT3\_30CVT (YI6ROT3-2.3D) 0.0000 Volts  
5 YI6ROT3\_2IC-20C (YI6ROT3-2.3D) -0.0011 Volts  
6 YI6ROT3\_3IC-30C (YI6ROT3-2.3D) -0.0010 Volts  
7 YI6ROT3\_2IC-3IC (YI6ROT3-2.3D) -0.0002 Volts  
8 YI6ROT3\_20C-30C (YI6ROT3-2.3D) -0.0003 Volts  
9 YI6ROT3-2.3-PS (YI6ROT3-2.3) 173.7278 Amps  
10 YI6ROT3-2.3-PSD (YI6ROT3-2.3D) 173.7278 Amps  
Operating Mode AUAU1  
Slog 1m Record # 834  
05/06/2005 01:30:40 Err Last Reset DSP Miss 720 FEC No 720

Signal  
Signal Name  
11 YI6ROT3B2\_GL (YI6ROT3-2.3) 65.8479 mVolts  
12 YI6ROT3R2\_GL (YI6ROT3-2.3) -63.3240 mVolts  
13 YI6ROT3B3\_GL (YI6ROT3-2.3) -47.4777 mVolts  
14 YI6ROT3R3\_GL (YI6ROT3-2.3) 48.7028 mVolts  
15  
16  
17  
18  
19  
20

# **ALCOVE 7C-ROTATORS**

## Bo7-rot3-1.4-ps

Quench/cfe-7c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:41:16 : cfe-7c-qd1 : DSP Version : 217.04 : ADO Version : 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
 Blue Ring Running Quench Mode (Seconds) Trippe  
 Yellow Ring Running Quench Mode 0 0 Trippe  
 Aux Circuit ---> Running 1 60Hz  
 <--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

1	B07ROT3_1ICVT (B07ROT3-1.4D)	0.0006	Volts	11	B07ROT3B1_GL (B07ROT3-1.4)	78.8828	mVolts
2	B07ROT3_10CVT (B07ROT3-1.4D)	0.0005	Volts	12	B07ROT3R1_GL (B07ROT3-1.4)	-76.2495	mVolts
3	B07ROT3_4ICVT (B07ROT3-1.4D)	-0.0008	Volts	13	B07ROT3B4_GL (B07ROT3-1.4)	-76.5164	mVolts
4	B07ROT3_40CVT (B07ROT3-1.4D)	-0.0005	Volts	14	B07ROT3R4_GL (B07ROT3-1.4)	77.9550	mVolts
5	B07ROT3_4IC-40C (B07ROT3-1.4D)	-0.0005	Volts	15	2_ROT3-CAL1	-10.0000	_
6	B07ROT3_1IC-10C (B07ROT3-1.4D)	0.0003	Volts	16			
7	B07ROT3_1IC-41C (B07ROT3-1.4D)	0.0011	Volts	17			
8	B07ROT3_10C-40C (B07ROT3-1.4D)	0.0009	Volts	18			
9	B07ROT3-1.4-PS (B07ROT3-1.4)	220.1764	Amps	19			
10	B07ROT3-1.4-PSD (B07ROT3-1.4)	220.1764	Amps	20			

Operating Mode : AUAU1

Slog 1m Record # 834

05/04/2005 11:23:16 Err Last Reset DSP Miss 720 FEC No 720

## bo7-rot3-2.3-ps

Quench/cfe-7c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:42:20 cfe-7c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 2 Select Page

Pg Dn Signal Name

1	B07R0T3_2ICVT (B07R0T3-2.3D)	-0.0001	Volts	11	B07R0T3B2_GL (B07R0T3-2.3)	-63.1587	mVolts
2	B07R0T3_20CVT (B07R0T3-2.3D)	0.0010	Volts	12	B07R0T3R2_GL (B07R0T3-2.3)	64.7244	mVolts
3	B07R0T3_3ICVT (B07R0T3-2.3D)	-0.0003	Volts	13	B07R0T3B3_GL (B07R0T3-2.3)	63.5551	mVolts
4	B07R0T3_30CVT (B07R0T3-2.3D)	-0.0001	Volts	14	B07R0T3R3_GL (B07R0T3-2.3)	-63.1969	mVolts
5	B07R0T3_2IC-20C (B07R0T3-2.3D)	-0.0008	Volts	15			
6	B07R0T3_3IC-30C (B07R0T3-2.3D)	0.0001	Volts	16			
7	B07R0T3_2IC-3IC (B07R0T3-2.3D)	0.0001	Volts	17			
8	B07R0T3_20C-30C (B07R0T3-2.3D)	0.0011	Volts	18			
9	B07R0T3-2.3-PS (B07R0T3-2.3)	185.5462	Amps	19			
10	B07R0T3-2.3-PSD (B07R0T3-2.3D)	185.5648	Amps	20			

Operating Mode AUAU1

Slog 1m Record # 835

05/04/2005 11:23:16 Err Last Reset DSP Miss 720 FEC No 720

(8.2) qddisplay.7c-qd1:upPetPage Nudge: 0 670

# yi7-rot3-1.4-ps

Quench/cfe-7c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:43:14 cfe-7c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 3 Select Page

Pg Dn Signal Name

1	YI7ROT3_1ICVT (YI7ROT3-1.4D)	0.0008	Volts	11	YI7ROT3B1_GL (YI7ROT3-1.4)	86.9432	mVolts
2	YI7ROT3_10CVT (YI7ROT3-1.4D)	0.0007	Volts	12	YI7ROT3R1_GL (YI7ROT3-1.4)	-80.2378	mVolts
3	YI7ROT3_4ICVT (YI7ROT3-1.4D)	-0.0006	Volts	13	YI7ROT3B4_GL (YI7ROT3-1.4)	-71.2776	mVolts
4	YI7ROT3_40CVT (YI7ROT3-1.4D)	-0.0002	Volts	14	YI7ROT3R4_GL (YI7ROT3-1.4)	68.2449	mVolts
5	YI7ROT3_1IC-10C (YI7ROT3-1.4D)	0.0002	Volts	15			
6	YI7ROT3_4IC-40C (YI7ROT3-1.4D)	-0.0012	Volts	16			
7	YI7ROT3_1IC-41C (YI7ROT3-1.4D)	0.0013	Volts	17			
8	YI7ROT3_10C-40C (YI7ROT3-1.4D)	0.0004	Volts	18			
9	YI7ROT3-1.4-PS (YI7ROT3-1.4D)	221.4634	Amps	19			
10	YI7ROT3-1.4-PSD (YI7ROT3-1.4D)	221.4634	Amps	20			

Operating Mode AUAU1

Slog 1m Record # 836

05/04/2005 11:23:16 Err Last Reset DSP Miss 720 FEC No 720

(8,2) qddisplay.7c-qd1:upPetPage Nudge: 0 812

# yi7-rot3-2.3-ps

Quench/cfe-7c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:43:49 cfe-7c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 4 Select Page

Pg Dn Signal Name

1	YI7ROT3_2ICVT (YI7ROT3-2.3D)	-0.0014	Volts	11	YI7ROT3B2_GL (YI7ROT3-2.3)	-67.5410	mVolts
2	YI7ROT3_20CVT (YI7ROT3-2.3D)	0.0000	Volts	12	YI7ROT3R2_GL (YI7ROT3-2.3)	70.7792	mVolts
3	YI7ROT3_3ICVT (YI7ROT3-2.3D)	-0.0002	Volts	13	YI7ROT3B3_GL (YI7ROT3-2.3)	58.3544	mVolts
4	YI7ROT3_30CVT (YI7ROT3-2.3D)	-0.0003	Volts	14	YI7ROT3R3_GL (YI7ROT3-2.3)	-58.6087	mVolts
5	YI7ROT3_2IC-20C (YI7ROT3-2.3D)	-0.0016	Volts	15			
6	YI7ROT3_3IC-30C (YI7ROT3-2.3D)	0.0003	Volts	16			
7	YI7ROT3_2IC-3IC (YI7ROT3-2.3D)	-0.0009	Volts	17			
8	YI7ROT3_20C-30C (YI7ROT3-2.3D)	0.0002	Volts	18			
9	YI7ROT3-2.3-PS (YI7ROT3-2.3D)	184.8267	Amps	19			
10	YI7ROT3-2.3-PSD (YI7ROT3-2.3D)	184.8267	Amps	20			

Operating Mode AUAU1

Slog 1m Record # 836

05/04/2005 11:23:16 Err Last Reset DSP Miss 720 FEC No 720

(8,2) qddisplay.7c-qd1:upPetPage Nudge: 0 579



# **ALCOVE 9A-ROTATORS**

## Bi8-rot3-1.4-ps

Quench/cfe-9a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:49:25 cfe-9a-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p; / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 1 60Hz

Aux Circuit ---> Running <--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

1	BI8ROT3_1ICVT (BI8ROT3-1.4D)	-0.0007	Volts	11	BI8ROT3B1_GL (BI8ROT3-1.4)	94.2740	mVolts
2	BI8ROT3_10CVT (BI8ROT3-1.4D)	-0.0004	Volts	12	BI8ROT3R1_GL (BI8ROT3-1.4)	-95.6697	mVolts
3	BI8ROT3_4ICVT (BI8ROT3-1.4D)	-0.0007	Volts	13	BI8ROT3B4_GL (BI8ROT3-1.4)	-76.3385	mVolts
4	BI8ROT3_40CVT (BI8ROT3-1.4D)	-0.0016	Volts	14	BI8ROT3R4_GL (BI8ROT3-1.4)	77.3678	mVolts
5	BI8ROT3_1IC-10C (BI8ROT3-1.4D)	-0.0006	Volts	15	8ROTATOR3-CAL1	-7.0000	_
6	BI8ROT3_4IC-40C (BI8ROT3-1.4D)	0.0006	Volts	16			
7	BI8ROT3_1IC-4IC (BI8ROT3-1.4D)	0.0000	Volts	17			
8	BI8ROT3_10C-40C (BI8ROT3-1.4D)	0.0018	Volts	18			
9	BI8ROT3-1.4-PS (BI8ROT3-1.4)	221.0200	Amps	19			
10	BI8ROT3-1.4-PSD (BI8ROT3-1.4)	221.9286	Amps	20			

Operating Mode H0A01

(8.2) qddisplay.9a-qd1:upPetPage Nudge: 0 858

## bi8-rot3-2.3-ps

Quench/cfe-9a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:50:08 cfe-9a-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 1 60Hz

Aux Circuit ---> Running

<---def dump

Pg Up 2 Select Page

Pg Dn	Signal Name	Value	Unit
1	BI8ROT3_2ICVT (BI8ROT3-2.3D)	-0.0004	Volts
2	BI8ROT3_20CVT (BI8ROT3-2.3D)	0.0001	Volts
3	BI8ROT3_3ICVT (BI8ROT3-2.3D)	-0.0010	Volts
4	BI8ROT3_30CVT (BI8ROT3-2.3D)	-0.0013	Volts
5	BI8ROT3_2IC-20C (BI8ROT3-2.3D)	-0.0006	Volts
6	BI8ROT3_3IC-30C (BI8ROT3-2.3D)	0.0002	Volts
7	BI8ROT3_2IC-3IC (BI8ROT3-2.3D)	0.0002	Volts
8	BI8ROT3_20C-30C (BI8ROT3-2.3D)	0.0009	Volts
9	BI8ROT3-2.3-PS (BI8ROT3-2.3D)	182.1474	Amps
10	BI8ROT3-2.3-PSD (BI8ROT3-2.3D)	182.1474	Amps

Operating Mode AOA01

Signal	Signal Name	Value	Unit
11	BI8ROT3B2_GL (BI8ROT3-2.3)	-79.0558	mVolts
12	BI8ROT3R2_GL (BI8ROT3-2.3)	79.3963	mVolts
13	BI8ROT3B3_GL (BI8ROT3-2.3)	62.5994	mVolts
14	BI8ROT3R3_GL (BI8ROT3-2.3)	-60.5812	mVolts
15			
16			
17			
18			
19			
20			

(8.2) qddisplay.9a-qd1:upPetPage Nudge: 0 780

# yo8-rot3-1.4-ps

Quench/cfe-9a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:51:03 cfe-9a-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 1 60Hz

Aux Circuit ---> Running <--def dump

Pg Up 3 Select Page

Pg Dn Signal Name

1	Y08ROT3_1ICVT (Y08ROT3-1.4D)	-0.0010	Volts	11	Y08ROT3B1_GL (Y08ROT3-1.4)	88.8369 mVolts
2	Y08ROT3_10CVT (Y08ROT3-1.4D)	-0.0009	Volts	12	Y08ROT3R1_GL (Y08ROT3-1.4)	-88.1228 mVolts
3	Y08ROT3_4ICVT (Y08ROT3-1.4D)	-0.0012	Volts	13	Y08ROT3B4_GL (Y08ROT3-1.4)	-74.8108 mVolts
4	Y08ROT3_40CVT (Y08ROT3-1.4D)	-0.0011	Volts	14	Y08ROT3R4_GL (Y08ROT3-1.4)	73.7431 mVolts
5	Y08ROT3_1IC-10C (Y08ROT3-1.4D)	-0.0003	Volts	15		
6	Y08ROT3_4IC-40C (Y08ROT3-1.4D)	-0.0005	Volts	16		
7	Y08ROT3_1IC-4IC (Y08ROT3-1.4D)	0.0001	Volts	17		
8	Y08ROT3_10C-40C (Y08ROT3-1.4D)	0.0005	Volts	18		
9	Y08ROT3-1.4-PS (Y08ROT3-1.4)	220.4555	Amps	19		
10	Y08ROT3-1.4-PSD (Y08ROT3-1.4)	220.4555	Amps	20		

Operating Mode H0A01

(8.2) qddisplay.9a-qd1:upPetPage Nudge: 0 966

# yo8-rot3-2.3-ps

Quench/cfe-9a-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:51:46 cfe-9a-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 1 60Hz

Aux Circuit ---> Running <--def dump

Pg Up 4 Select Page

Pg Dn Signal Name

1	Y08ROT3_2ICVT (Y08ROT3-2.3D)	-0.0008	Volts	I 11	Y08ROT3B2_GL (Y08ROT3-2.3)	-73.0112 mVolts
2	Y08ROT3_20CVT (Y08ROT3-2.3D)	-0.0005	Volts	I 12	Y08ROT3R2_GL (Y08ROT3-2.3)	70.3623 mVolts
3	Y08ROT3_3ICVT (Y08ROT3-2.3D)	-0.0005	Volts	I 13	Y08ROT3B3_GL (Y08ROT3-2.3)	61.3437 mVolts
4	Y08ROT3_30CVT (Y08ROT3-2.3D)	-0.0011	Volts	I 14	Y08ROT3R3_GL (Y08ROT3-2.3)	-58.4384 mVolts
5	Y08ROT3_2IC-20C (Y08ROT3-2.3D)	-0.0007	Volts	I 15		
6	Y08ROT3_3IC-30C (Y08ROT3-2.3D)	0.0006	Volts	I 16		
7	Y08ROT3_2IC-3IC (Y08ROT3-2.3D)	-0.0009	Volts	I 17		
8	Y08ROT3_20C-30C (Y08ROT3-2.3D)	0.0006	Volts	I 18		
9	Y08ROT3-2.3-PS (Y08ROT3-2.3)	184.7833	Amps	I 19		
10	Y08ROT3-2.3-PSD (Y08ROT3-2.3)	184.7833	Amps	I 20		

Operating Mode AUAU1

(8.2) qddisplay.9a-qd1:upPetPage Nudge: 0 887

## **ALCOVE 9C-SNAKES**

## Bi9-snk7-1.4-ps

Quench/cfe-9c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:53:37 cfe-9c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 1 Select Page

Pg Dn Signal Name

1	BI9SNK7_1ICVT (BI9SNK7-1.4D)	-0.0006	Volts	11	BI9SNK7B1_GL (BI9SNK7-1.4)	-22.3459	mVolts
2	BI9SNK7_10CVT (BI9SNK7-1.4D)	-0.0006	Volts	12	BI9SNK7R1_GL (BI9SNK7-1.4)	20.8385	mVolts
3	BI9SNK7_4ICVT (BI9SNK7-1.4D)	-0.0016	Volts	13	BI9SNK7B4_GL (BI9SNK7-1.4)	16.8223	mVolts
4	BI9SNK7_40CVT (BI9SNK7-1.4D)	-0.0027	Volts	14	BI9SNK7R4_GL (BI9SNK7-1.4)	-16.3725	mVolts
5	BI9SNK7_1IC/10C (BI9SNK7-1.4D)	0.0003	Volts	15	9SNAKE-CAL1	-18.0000	_
6	BI9SNK7_4IC/40C (BI9SNK7-1.4D)	-0.0001	Volts	16			
7	BI9SNK7_1IC/4IC (BI9SNK7-1.4D)	0.0015	Volts	17			
8	BI9SNK7_10C/40C (BI9SNK7-1.4D)	0.0015	Volts	18			
9	BI9SNK7-1.4-PS (BI9SNK7-1.4)	100.0018	Amps	19			
10	BI9-SNK7-1.4-PSD (BI9SNK7-1.4D)	100.0018	Amps	20			

Operating Mode AUAU1

Slog 1m Record # 853

05/03/2005 15:14:35 Err Last Reset DSP Miss 720 FEC No 720

Times 1.633 1.159 1.381

(8,2) qddisplay.9c-qd1:upPetPage Nudge: 0 673

# bi9-snk7-2.3-ps

Quench/cfe-9c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:54:20 cfe-9c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 2 Select Page

Pg Dn Signal Name

Signal	Signal Name	Value	Unit
1	BI9SNK7_2ICVT (BI9SNK7-2.3D)	-0.0004	Volts
2	BI9SNK7_20CVT (BI9SNK7-2.3D)	-0.0013	Volts
3	BI9SNK7_3ICVT (BI9SNK7-2.3D)	-0.0019	Volts
4	BI9SNK7_30CVT (BI9SNK7-2.3D)	-0.0029	Volts
5	BI9SNK7_2IC/20C (BI9SNK7-2.3D)	0.0013	Volts
6	BI9SNK7_3IC/30C (BI9SNK7-2.3D)	-0.0008	Volts
7	BI9SNK7_2IC/3IC (BI9SNK7-2.3D)	0.0018	Volts
8	BI9SNK7_20C/30C (BI9SNK7-2.3D)	0.0009	Volts
9	BI9-SNK7-2.3-PS (BI9SNK7-2.3)	323.3290	Amps
10	BI9-SNK7-2.3-PSD (BI9SNK7-2.3D)	323.3290	Amps
11	BI9SNK7B2_GL (BI9SNK7-2.3)	75.7054	mVolts
12	BI9SNK7R2_GL (BI9SNK7-2.3)	-79.6481	mVolts
13	BI9SNK7B3_GL (BI9SNK7-2.3)	-60.1822	mVolts
14	BI9SNK7R3_GL (BI9SNK7-2.3)	64.4626	mVolts
15			
16			
17			
18			
19			
20			

Operating Mode AUAU1

Slog 1m Record # 854

05/03/2005 15:14:35 Err Last Reset DSP Miss 720 FEC No 720

Times 1.633 1.159 1.383

(8.2) qddisplay.9c-qd1:upPetPage Nudge: 0 581



# yo9-snk7-1.4-ps

Quench/cfe-9c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:54:49 cfe-9c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p: / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
(Seconds) Trippe

Blue Ring Running Quench Mode 0 0 Trippe

Yellow Ring Running Quench Mode 0 0 Trippe

Aux Circuit ---> Running 1 60Hz

<--def dump

Pg Up 3 Select Page

Pg Dn Signal Name

1	Y09SNK7_1ICVT (Y09SNK7-1.4D)	-0.0005	Volts	I 11	Y09SNK7B1_GL (Y09SNK7-1.4)	-28.0601 mVolts
2	Y09SNK7_10CVT (Y09SNK7-1.4D)	0.0000	Volts	I 12	Y09SNK7R1_GL (Y09SNK7-1.4)	28.8633 mVolts
3	Y09SNK7_4ICVT (Y09SNK7-1.4D)	-0.0013	Volts	I 13	Y09SNK7B4_GL (Y09SNK7-1.4)	34.6715 mVolts
4	Y09SNK7_40CVT (Y09SNK7-1.4D)	-0.0023	Volts	I 14	Y09SNK7R4_GL (Y09SNK7-1.4)	-36.3594 mVolts
5	Y09SNK7_1IC/10C (Y09SNK7-1.4D)	-0.0002	Volts	I 15		
6	Y09SNK7_4IC/40C (Y09SNK7-1.4D)	0.0001	Volts	I 16		
7	Y09SNK7_1IC/4IC (Y09SNK7-1.4D)	0.0011	Volts	I 17		
8	Y09SNK7_10C/40C (Y09SNK7-1.4D)	0.0019	Volts	I 18		
9	Y09SNK7-1.4-PS (Y09SNK7-1.4)	97.9023	Amps	I 19		
10	Y09-SNK7-1.4-PSD (Y09SNK7-1.4D)	97.9023	Amps	I 20		

Operating Mode QUQU1

Slog 1m Record # 854

05/03/2005 15:14:35 Err Last Reset DSP Miss 720 FEC No 720

Times 1.633 1.159 1.383

(8,2) qddisplay.9c-qd1:upPetPage Nudge: 0 216

# yo9-snk7-2.3-ps

Quench/cfe-9c-qd1

Page PPM Device Data Tools Buffer Help

05/06/2005 11:55:48 cfe-9c-qd1 DSP Version 217.04 ADO Version 0423.04

1.11p; / Oct 11 2004 / 15:12:18

QD Status ---> Running QD Command DataCommand Missed HB Permit  
Blue Ring Running Quench Mode (Seconds) Trippe  
Yellow Ring Running Quench Mode 0 0 Trippe  
Aux Circuit ---> Running 1 60Hz  
<--def dump

Pg Up 4 Select Page

Pg Dn Signal Name

1	Y09SNK7_2ICVT (Y09SNK7-2.3D)	0.0030	Volts
2	Y09SNK7_20CVT (Y09SNK7-2.3D)	0.0030	Volts
3	Y09SNK7_3ICVT (Y09SNK7-2.3D)	0.0016	Volts
4	Y09SNK7_30CVT (Y09SNK7-2.3D)	0.0022	Volts
5	Y09SNK7_2IC/20C (Y09SNK7-2.3D)	0.0015	Volts
6	Y09SNK7_3IC/30C (Y09SNK7-2.3D)	0.0001	Volts
7	Y09SNK7_2IC/3IC (Y09SNK7-2.3D)	0.0015	Volts
8	Y09SNK7_20C/30C (Y09SNK7-2.3D)	0.0009	Volts
9	Y09SNK7-2.3-P5 (Y09SNK7-2.3)	324.0857	Amps
10	Y09-SNK7-2.3-P5D (Y09SNK7-2.3D)	324.0857	Amps

Operating Mode AUAU1

Slog 1m Record # 855

05/03/2005 15:14:35 Err Last Reset DSP Miss 720 FEC No 720

Times 1,633 1,159 1,381

Signal

Signal	Signal Name	
11	Y09SNK7B2_GL (Y09SNK7-2.3)	107.5987 mVolts
12	Y09SNK7R2_GL (Y09SNK7-2.3)	-105.7254 mVolts
13	Y09SNK7B3_GL (Y09SNK7-2.3)	-132.5908 mVolts
14	Y09SNK7R3_GL (Y09SNK7-2.3)	134.6928 mVolts
15		
16		
17		
18		
19		
20		

(8.2) qddisplay.9c-qd1:upPetPage Nudge: 0 468

# **Procedure for using Slow Logs to check Snake and Rotator Coil Voltage Taps and Gas cooled Leads**

**Procedure starts on page: 36**

## **Slow Log Example Pages**

**Alcove 5c.....Page 44**

**Alcove 7a.....Page 49**

**Alcove 7c.....Page 54**

**Alcove 9a.....Page 59**

**Alcove 3c.....Page 64-only blue examples**

**Alcove 9c.....no examples**

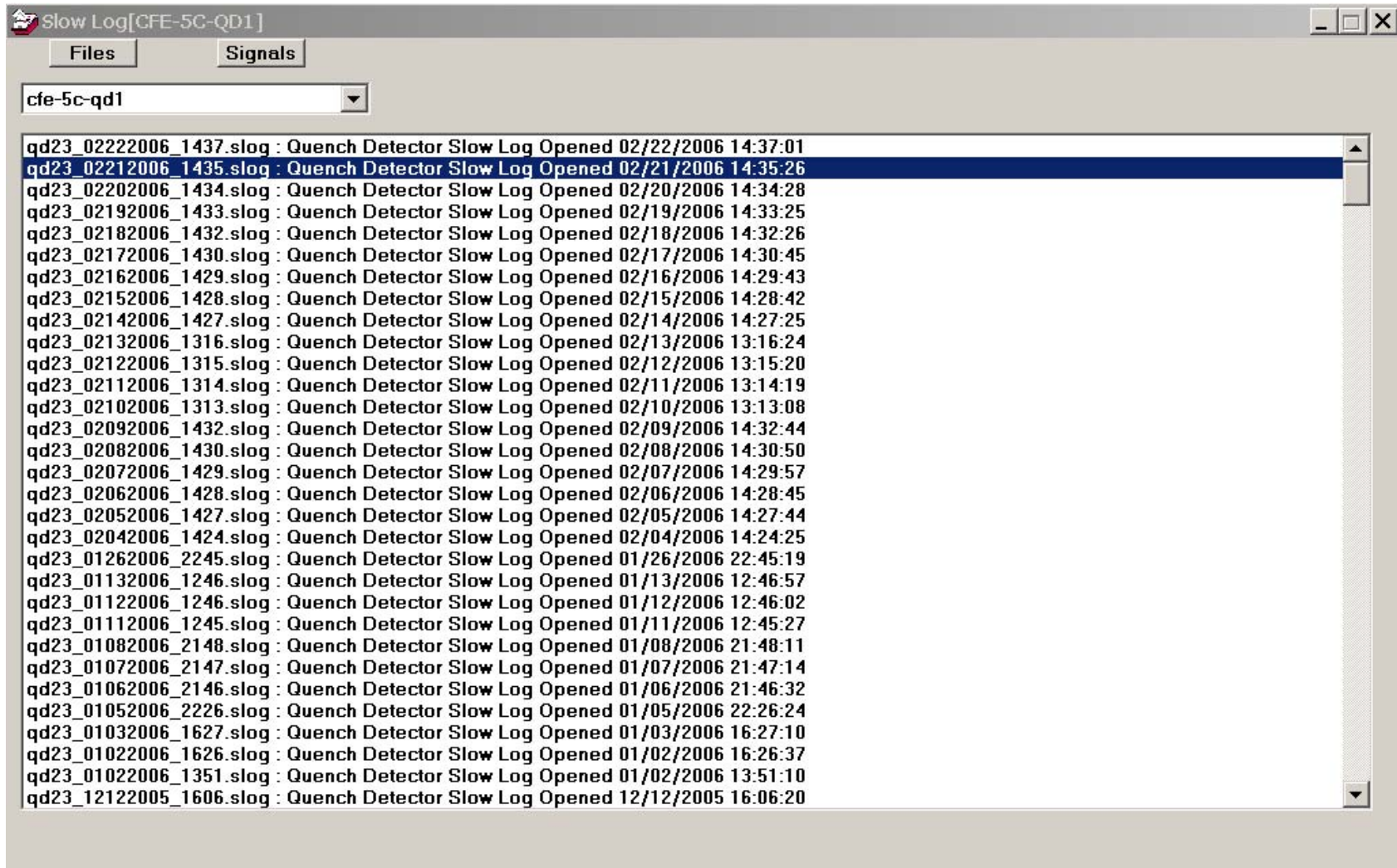
## **Gas Cooled Lead Examples**

**Rotator bi5-rot3-1.4-ps example.....Page 70**

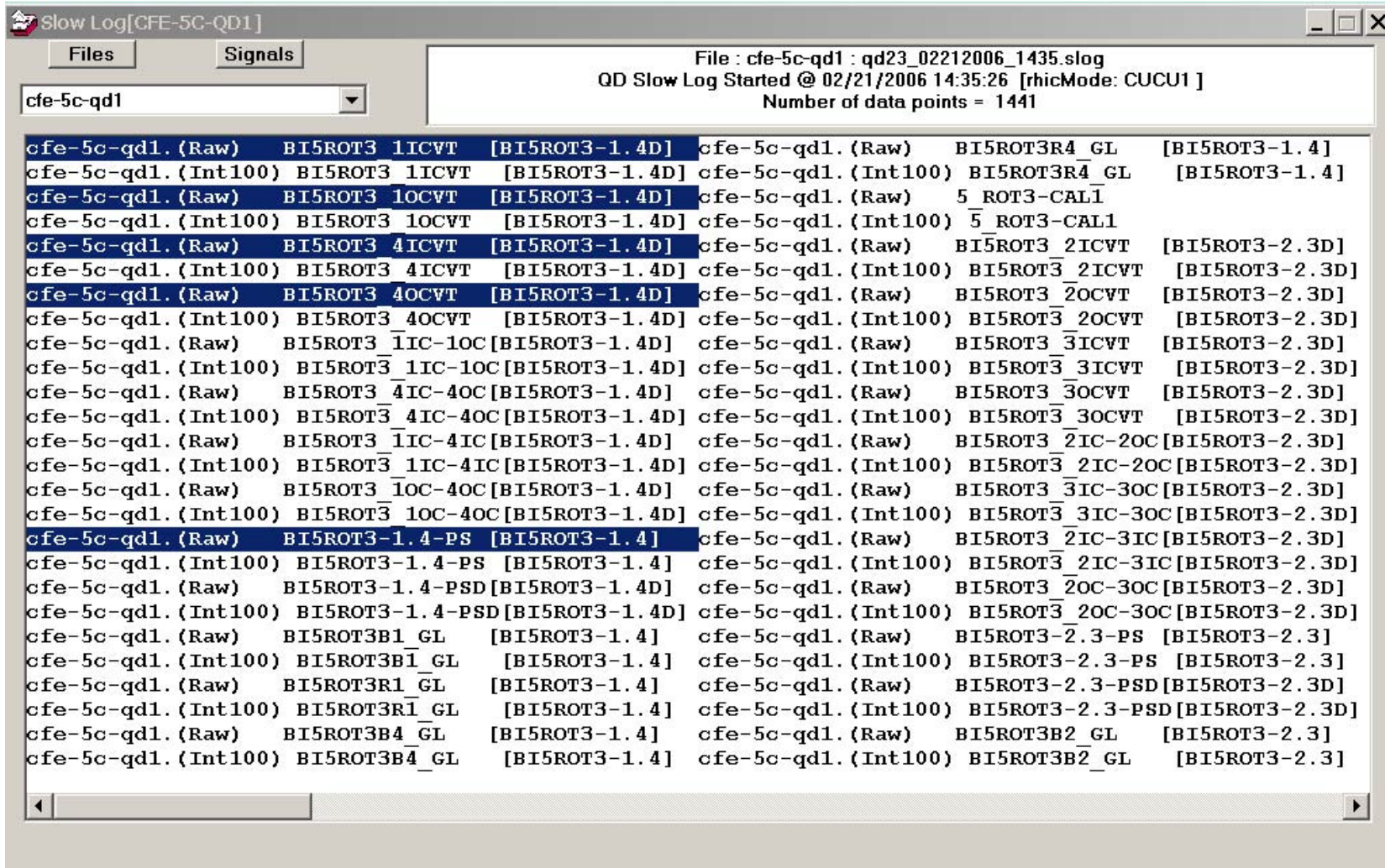
**Snake bo3-snk7-1.4-ps example.....Page 71**

## Procedure for Coil Voltage Tap Checkout using the quench detection slow logs

- 1) Bring up qdplot
- 2) Select a system (quench detector)
- 3) Click on SLOW LOG. **You must pick a slow log, for the p.s. you are interested in, where only that ps is being ramped. For example if you are looking at a 1.4 then the 2.3 cannot be ramping. If you are looking at a 2.3 then the 1.4 cannot be ramping. Only one of the pair of p.s.'s can be ramping at a time to do this check.**
- 4) Do not select the most recent slow log (top most) select the 2<sup>nd</sup> one down, this is the next most recent. See figure below with blue highlight, this is the one to choose.



- 5) Select the 4 raw voltage tap signals to look at and the raw p.s. current. Using bi5-rot3-1.4 as an example these are the ones you would choose:



File : cfe-5c-qd1 : qd23\_02212006\_1435.slog  
QD Slow Log Started @ 02/21/2006 14:35:26 [rhicMode: CUCU1 ]  
Number of data points = 1441

cfe-5c-qd1

cfe-5c-qd1.(Raw) BI5ROT3 1ICVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3R4_GL [BI5ROT3-1.4]
cfe-5c-qd1.(Int100) BI5ROT3 1ICVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3R4_GL [BI5ROT3-1.4]
cfe-5c-qd1.(Raw) BI5ROT3 1OCVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) 5 ROT3-CAL1
cfe-5c-qd1.(Int100) BI5ROT3 1OCVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) 5 ROT3-CAL1
cfe-5c-qd1.(Raw) BI5ROT3 4ICVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3 2ICVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3 4ICVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3 2ICVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3 4OCVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3 2OCVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3 4OCVT [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3 2OCVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3 1IC-1OC [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3 3ICVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3 1IC-1OC [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3 3ICVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3 4IC-4OC [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3 3OCVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3 4IC-4OC [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3 3OCVT [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3 1IC-4IC [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3 2IC-2OC [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3 1IC-4IC [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3 2IC-2OC [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3 1OC-4OC [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3 3IC-3OC [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3 1OC-4OC [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3 3IC-3OC [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3-1.4-PS [BI5ROT3-1.4]	cfe-5c-qd1.(Raw) BI5ROT3 2IC-3IC [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3-1.4-PS [BI5ROT3-1.4]	cfe-5c-qd1.(Int100) BI5ROT3 2IC-3IC [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3-1.4-PSD [BI5ROT3-1.4D]	cfe-5c-qd1.(Raw) BI5ROT3 2OC-3OC [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3-1.4-PSD [BI5ROT3-1.4D]	cfe-5c-qd1.(Int100) BI5ROT3 2OC-3OC [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3B1_GL [BI5ROT3-1.4]	cfe-5c-qd1.(Raw) BI5ROT3-2.3-PS [BI5ROT3-2.3]
cfe-5c-qd1.(Int100) BI5ROT3B1_GL [BI5ROT3-1.4]	cfe-5c-qd1.(Int100) BI5ROT3-2.3-PS [BI5ROT3-2.3]
cfe-5c-qd1.(Raw) BI5ROT3R1_GL [BI5ROT3-1.4]	cfe-5c-qd1.(Raw) BI5ROT3-2.3-PSD [BI5ROT3-2.3D]
cfe-5c-qd1.(Int100) BI5ROT3R1_GL [BI5ROT3-1.4]	cfe-5c-qd1.(Int100) BI5ROT3-2.3-PSD [BI5ROT3-2.3D]
cfe-5c-qd1.(Raw) BI5ROT3B4_GL [BI5ROT3-1.4]	cfe-5c-qd1.(Raw) BI5ROT3B2_GL [BI5ROT3-2.3]
cfe-5c-qd1.(Int100) BI5ROT3B4_GL [BI5ROT3-1.4]	cfe-5c-qd1.(Int100) BI5ROT3B2_GL [BI5ROT3-2.3]



- 6) If you are working with bi5-rot3-2.3 then you would choose the following 4 raw voltage taps and raw p.s. current below. Use this procedure for all 1.4 and 2.3 p.s.'s, blue or yellow:

Slow Log[CFE-5C-QD1]

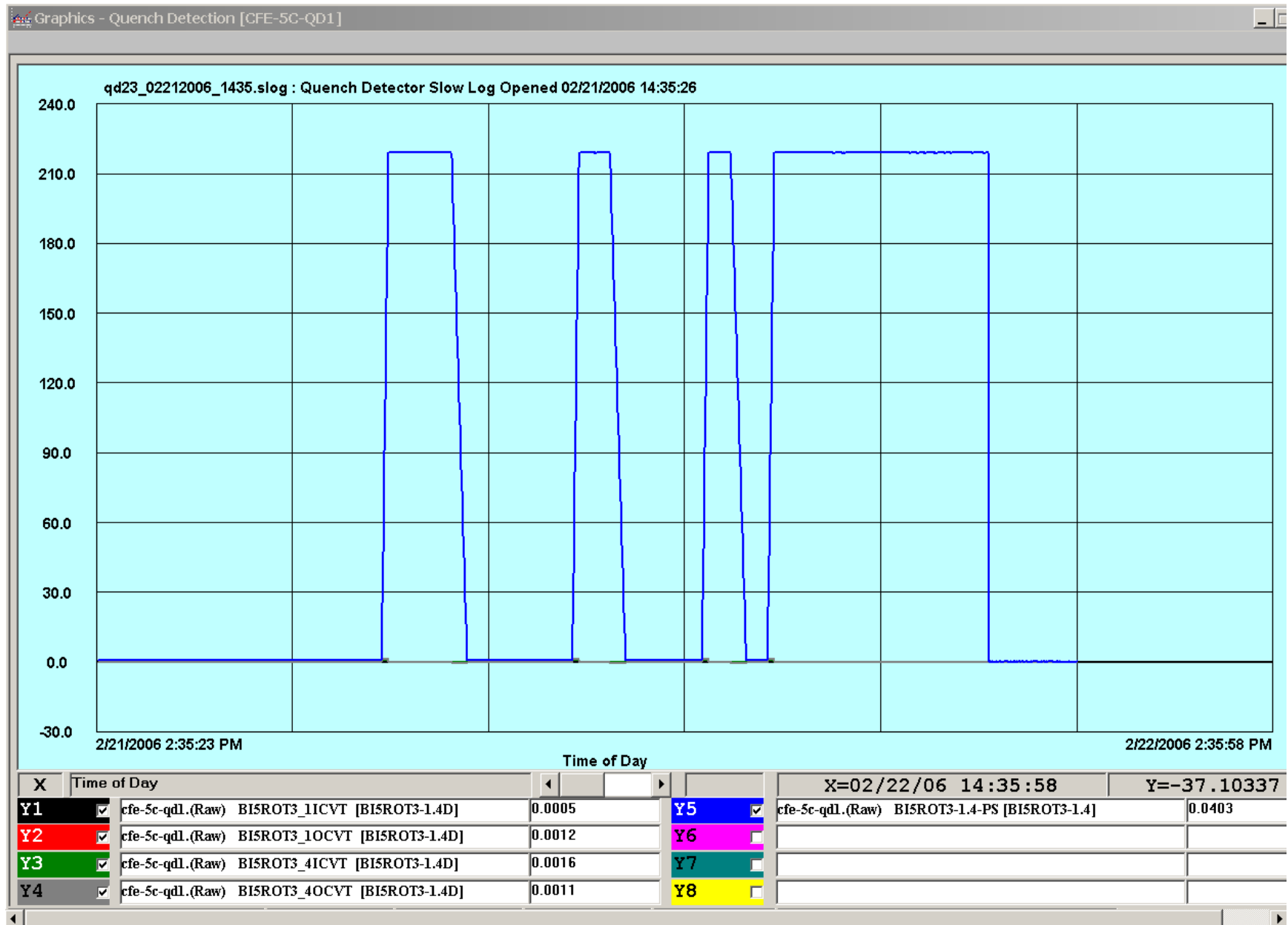
Files Signals

File : cfe-5c-qd1 : qd23\_02212006\_1435.slog  
QD Slow Log Started @ 02/21/2006 14:35:26 [rhicMode: CUCU1]  
Number of data points = 1441

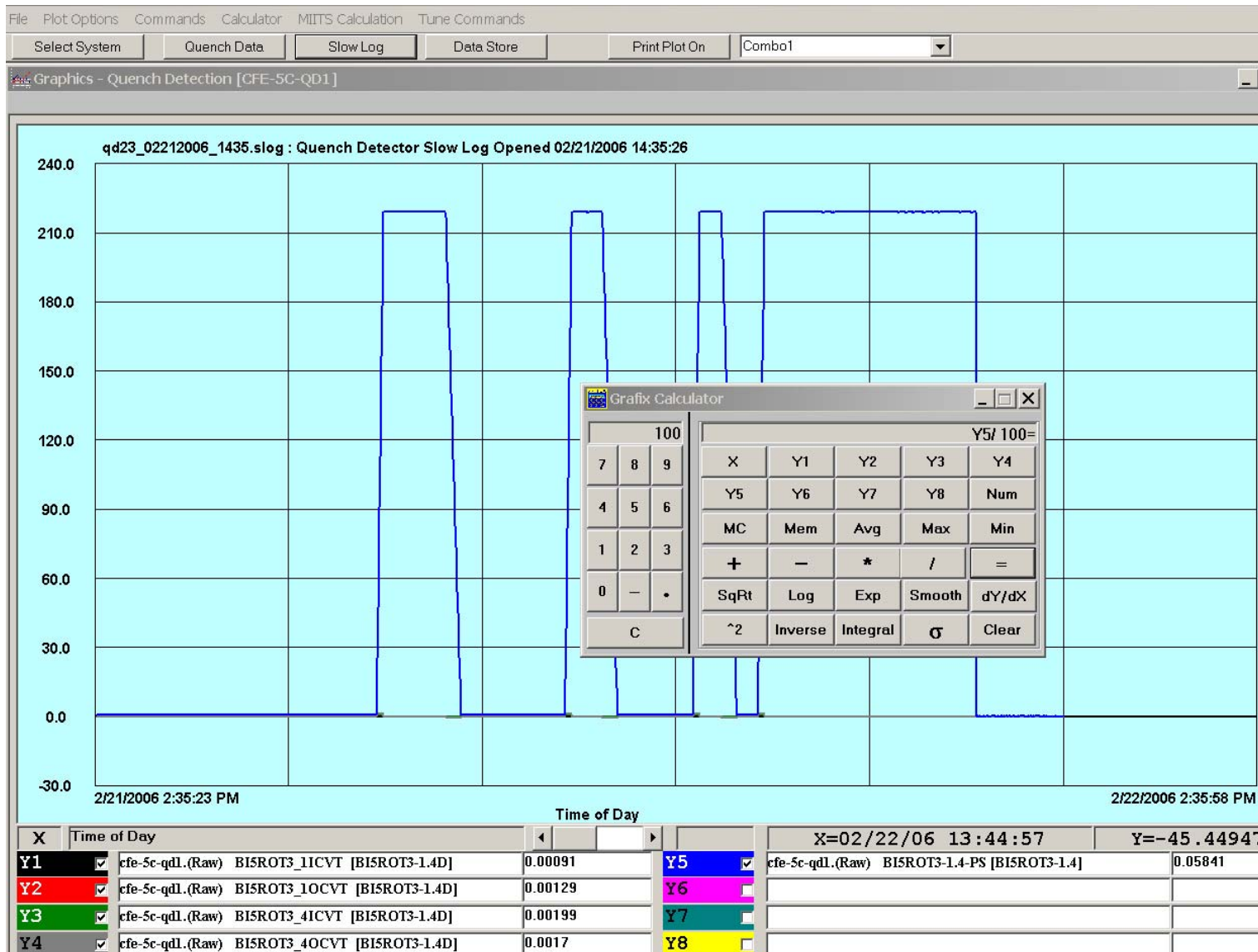
cfe-5c-qd1

cfe-5c-qd1.(Raw)	BI5ROT3R4_GL	[BI5ROT3-1.4]	cfe-5c-qd1.(Raw)	BI5ROT3R2_GL	[BI5ROT3-2.3]
cfe-5c-qd1.(Int100)	BI5ROT3R4_GL	[BI5ROT3-1.4]	cfe-5c-qd1.(Int100)	BI5ROT3R2_GL	[BI5ROT3-2.3]
cfe-5c-qd1.(Raw)	5_ROT3-CAL1		cfe-5c-qd1.(Raw)	BI5ROT3B3_GL	[BI5ROT3-2.3]
cfe-5c-qd1.(Int100)	5_ROT3-CAL1		cfe-5c-qd1.(Int100)	BI5ROT3B3_GL	[BI5ROT3-2.3]
cfe-5c-qd1.(Raw)	BI5ROT3_2ICVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	BI5ROT3R3_GL	[BI5ROT3-2.3]
cfe-5c-qd1.(Int100)	BI5ROT3_2ICVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	BI5ROT3R3_GL	[BI5ROT3-2.3]
cfe-5c-qd1.(Raw)	BI5ROT3_2OCVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3_1ICVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3_2OCVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3_1ICVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3_3ICVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3_1OCVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3_3ICVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3_1OCVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3_3OCVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3_4ICVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3_3OCVT	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3_4ICVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3_2IC-2OC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3_4OCVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3_2IC-2OC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3_4OCVT	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3_3IC-3OC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3_1IC-1OC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3_3IC-3OC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3_1IC-1OC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3_2IC-3IC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3_4IC-4OC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3_2IC-3IC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3_4IC-4OC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3_2OC-3OC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3_1IC-4IC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3_2OC-3OC	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3_1IC-4IC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3-2.3-PS	[BI5ROT3-2.3]	cfe-5c-qd1.(Raw)	YO5ROT3_1OC-4OC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3-2.3-PS	[BI5ROT3-2.3]	cfe-5c-qd1.(Int100)	YO5ROT3_1OC-4OC	[YO5ROT3-1.4D]
cfe-5c-qd1.(Raw)	BI5ROT3-2.3-PSD	[BI5ROT3-2.3D]	cfe-5c-qd1.(Raw)	YO5ROT3-1.4-PS	[YO5ROT3-1.4]
cfe-5c-qd1.(Int100)	BI5ROT3-2.3-PSD	[BI5ROT3-2.3D]	cfe-5c-qd1.(Int100)	YO5ROT3-1.4-PS	[YO5ROT3-1.4]
cfe-5c-qd1.(Raw)	BI5ROT3B2_GL	[BI5ROT3-2.3]	cfe-5c-qd1.(Raw)	YO5ROT3-1.4-PSD	[YO5ROT3-1.4D]
cfe-5c-qd1.(Int100)	BI5ROT3B2_GL	[BI5ROT3-2.3]	cfe-5c-qd1.(Int100)	YO5ROT3-1.4-PSD	[YO5ROT3-1.4D]

- 7) Now that you have the signals on qd plot you should make sure the raw current signal is in the space for Y5 as shown below. Click on qdplot to look at the waveforms. Y5 (blue), the current signal, should be much bigger than the voltage tap signals, see below. You will need to scale the current signal with the calculator.

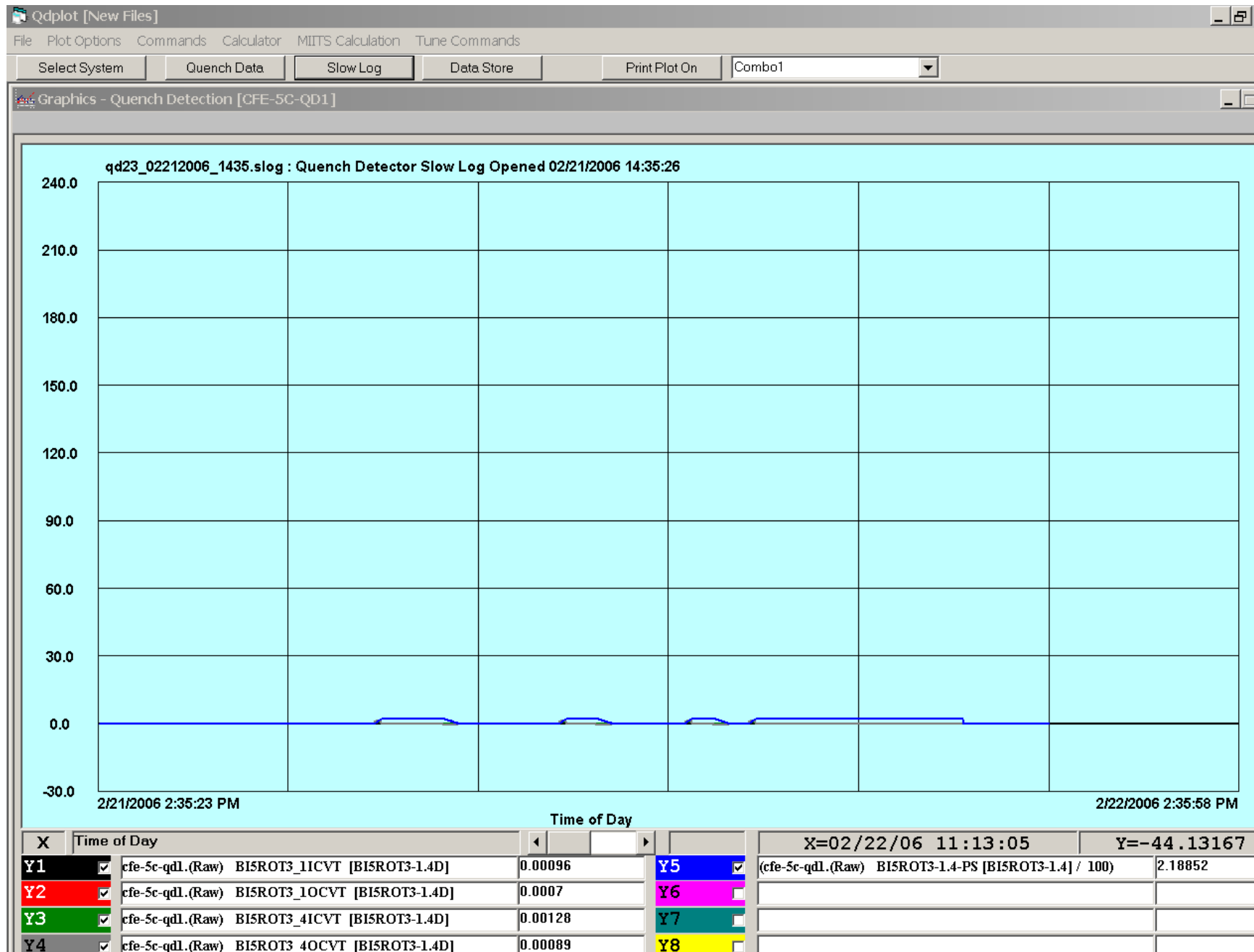


- 8) Click on “Calculator” on the top menu. Enter 100 on the left hand side of the calculator. Then, on the right hand side of the calculator click on “Y5/NUM=” as is shown below. Then click on “Y5”. The calculator screen on the right hand side will go blank but the 100 will stay on the calculator screen on the right hand side. Also, Y5 will now be scaled down by 100 times on the qdplot. See what Y5 says now on the next page.

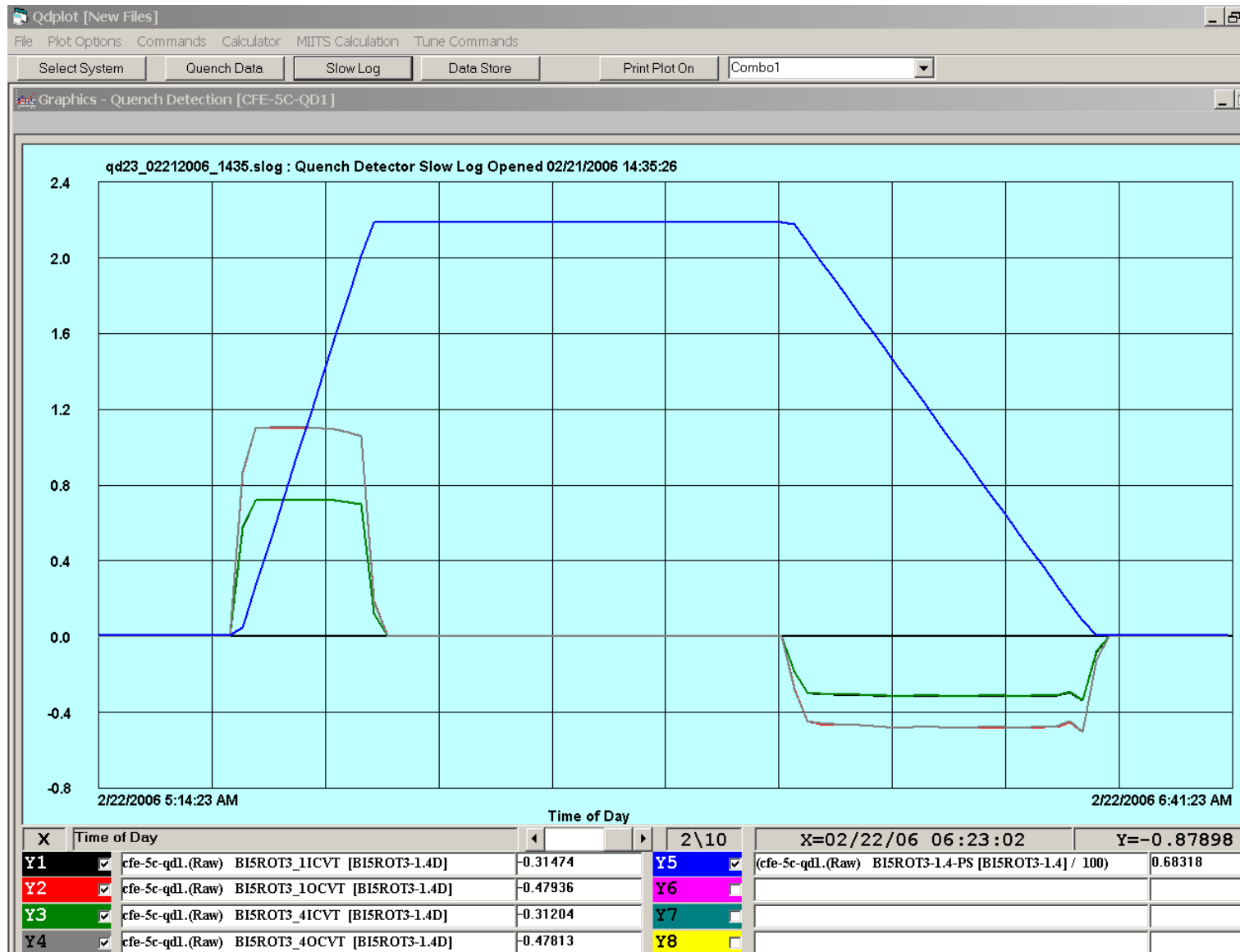




9) Click on the qd plot You see below the blue waveform got a lot smaller and Y5 is now shown as divided by 100.



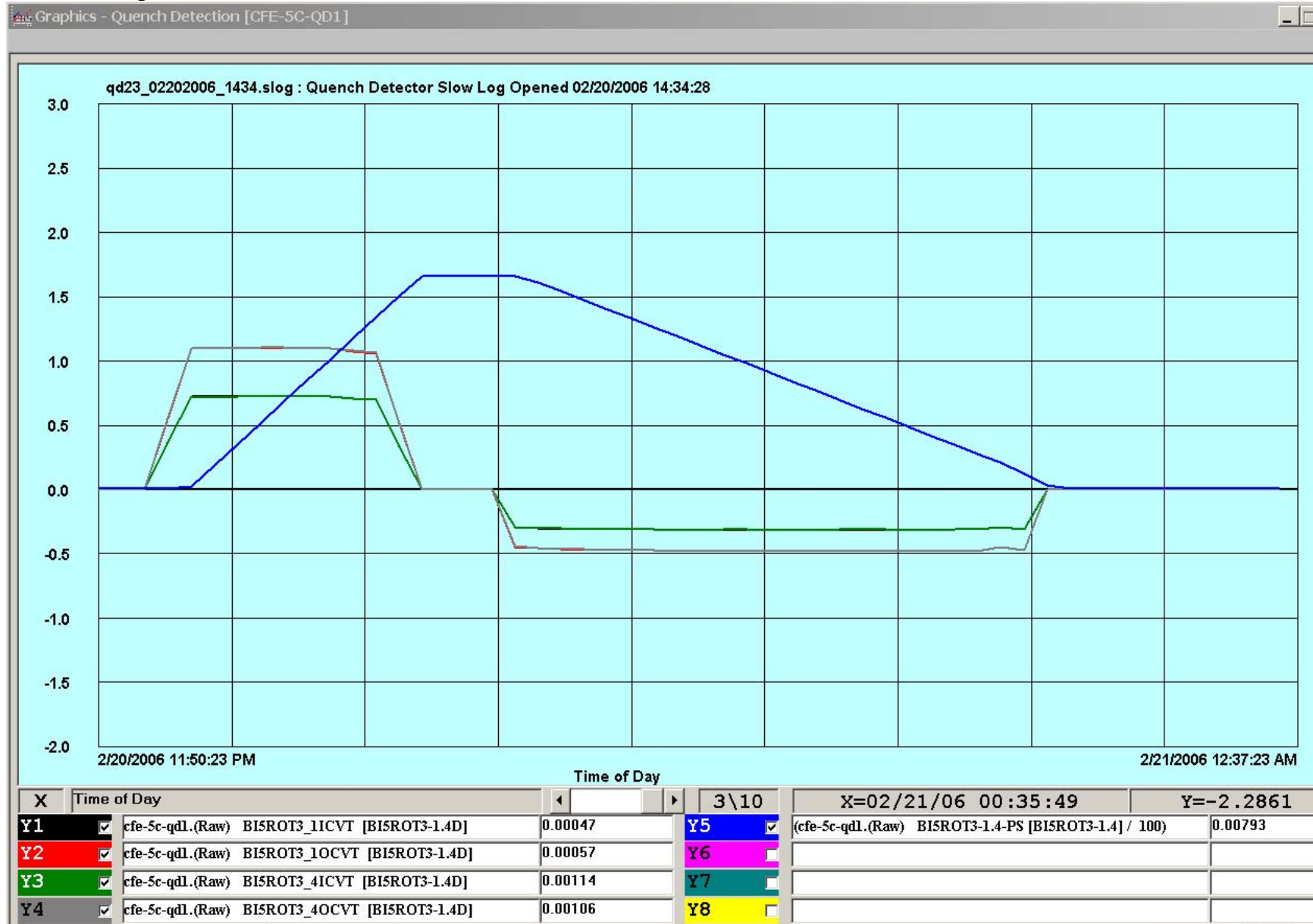
- 10) You should now pick one of these ramps and zoom in on it as shown below. Here you see the 2 inner coils are equal. The 2 outer coils are equal. You also see that when the ps current is ramping up you do have a change in current ( $di/dt \neq 0$ ) so you have positive voltage on the coils. You also see that when the ps current is ramping down you do have a change in current ( $di/dt \neq 0$ ) so you have negative voltage on the coils. When the current is not changing ( $di/dt=0$ ) the voltage on all coils =0.



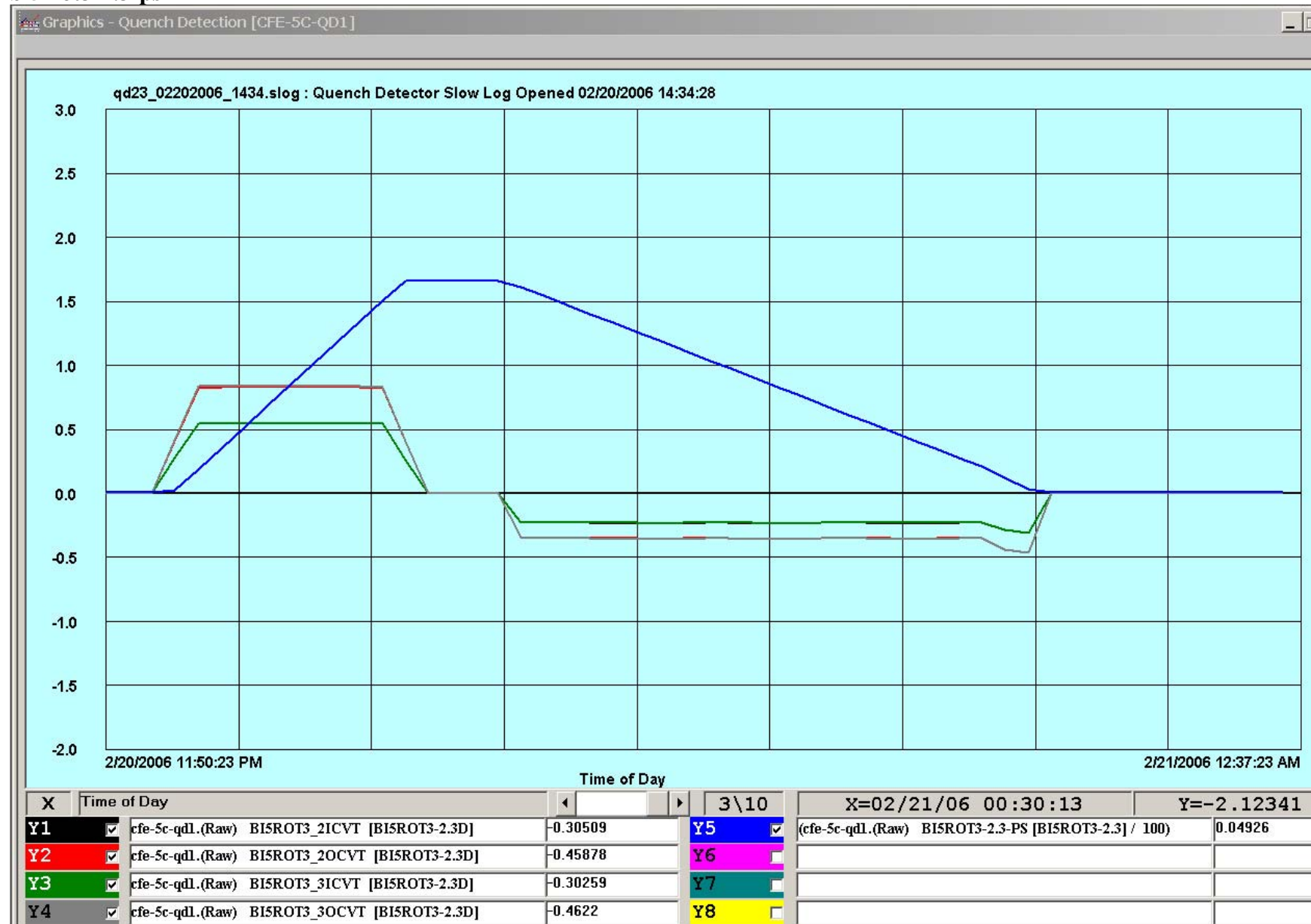
11) What follows are plots for all of the snakes and rotators so you can compare coil voltages and ps current ramps.

## **Alcove 5C-Slow Logs**

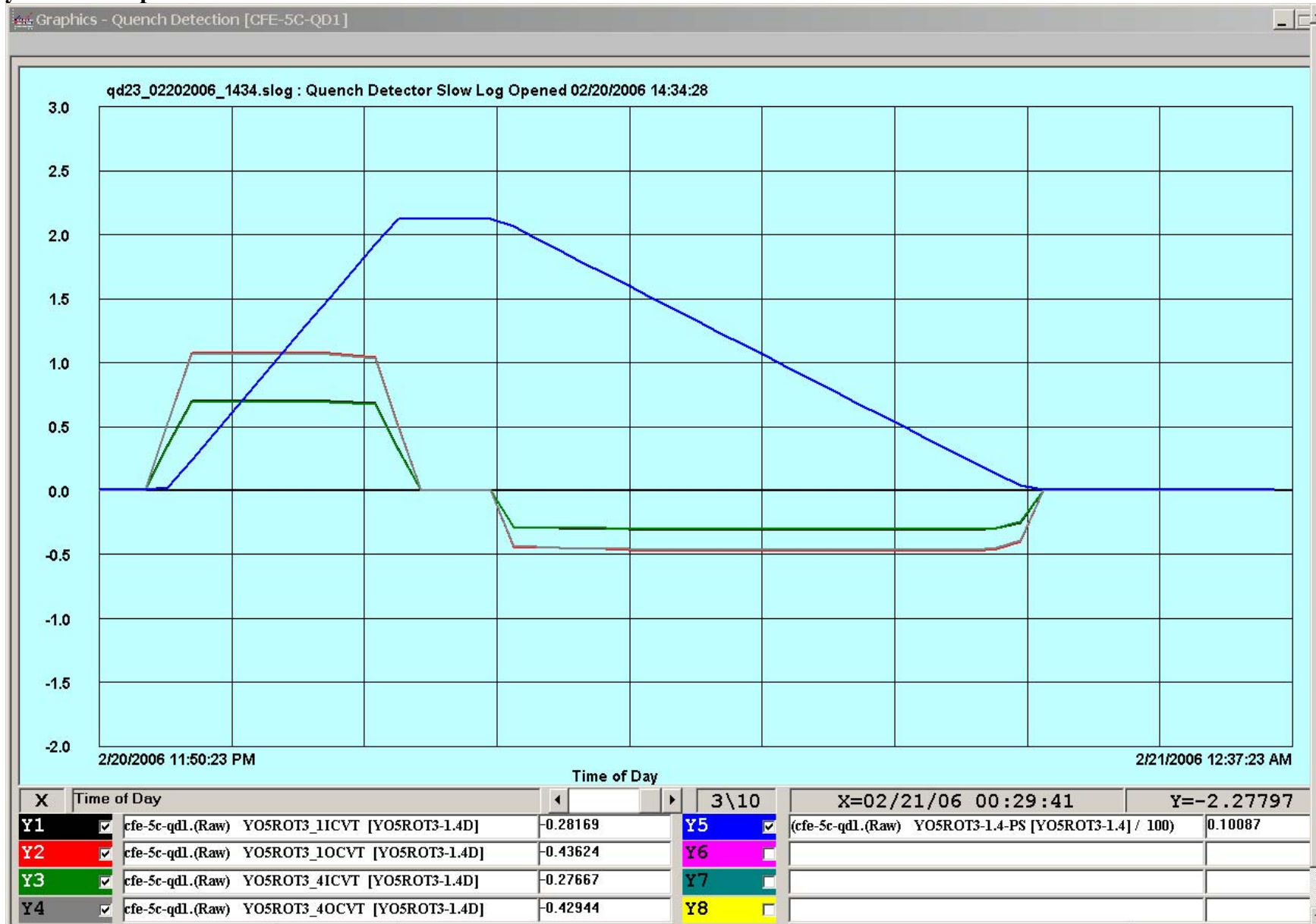
# Bi5-rot3-1.4-ps



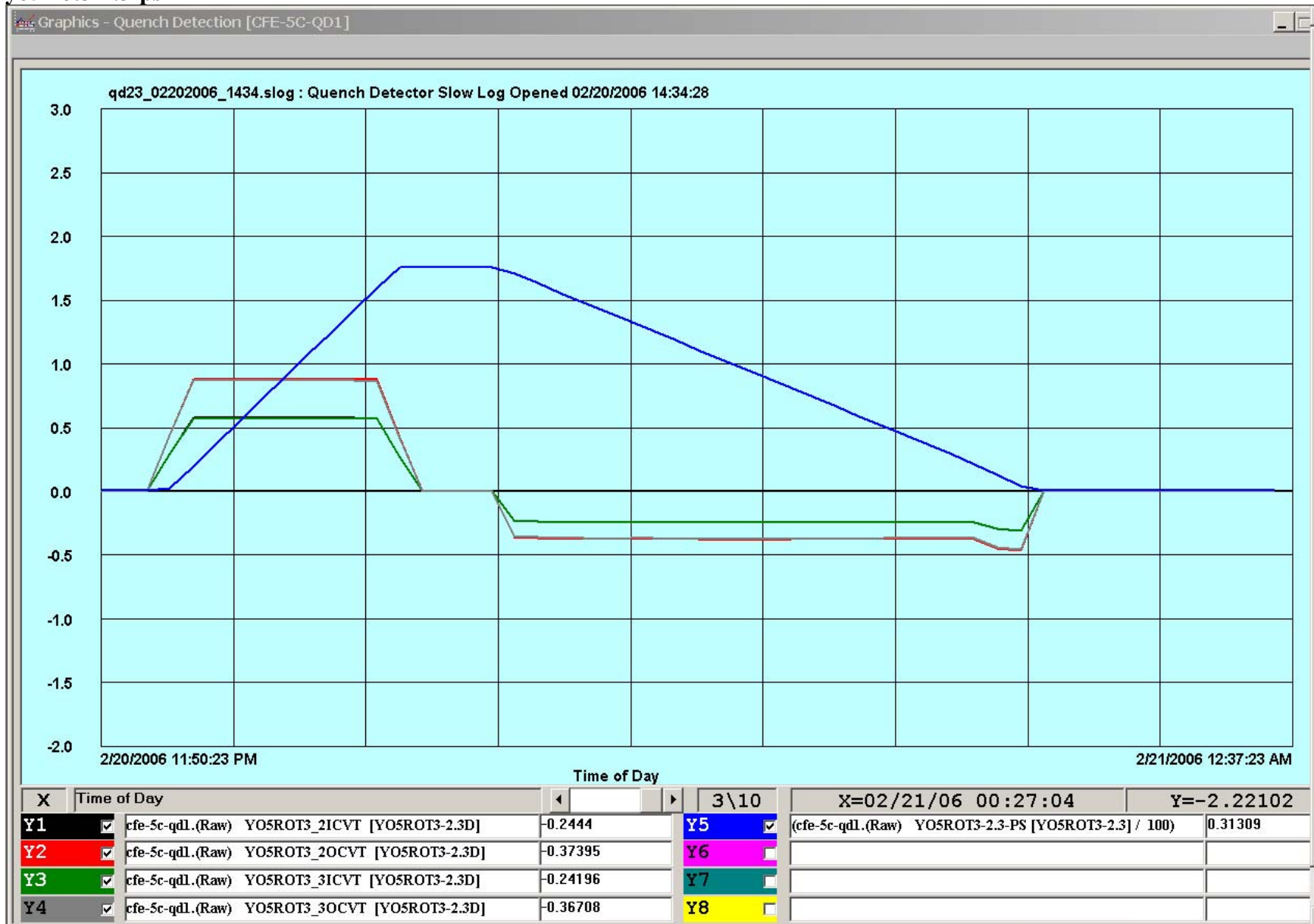
# bi5-rot3-2.3-ps



# yo5-rot3-1.4-ps



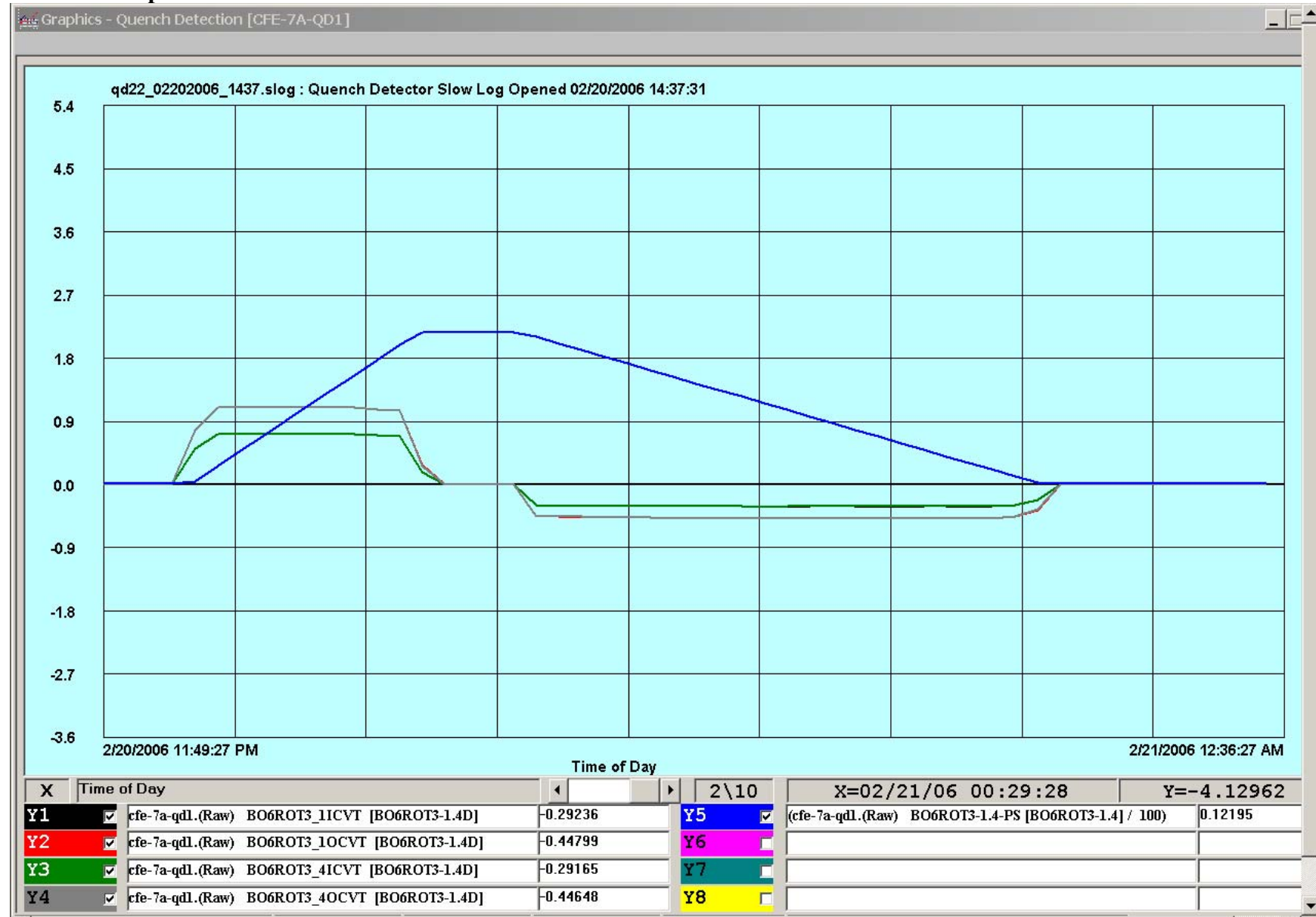
# yo5-rot3-2.3-ps



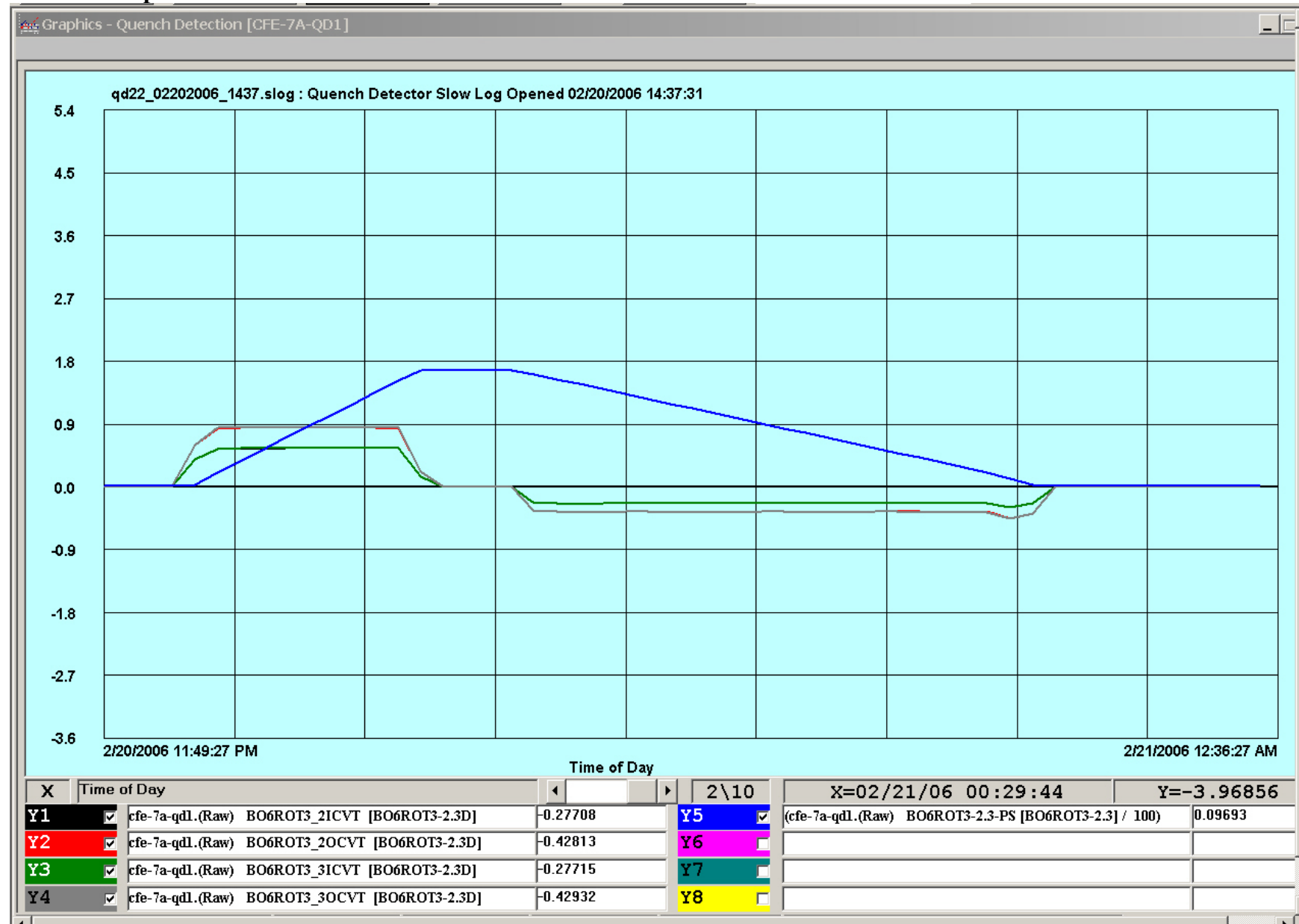


## **Alcove 7A-Slow Logs**

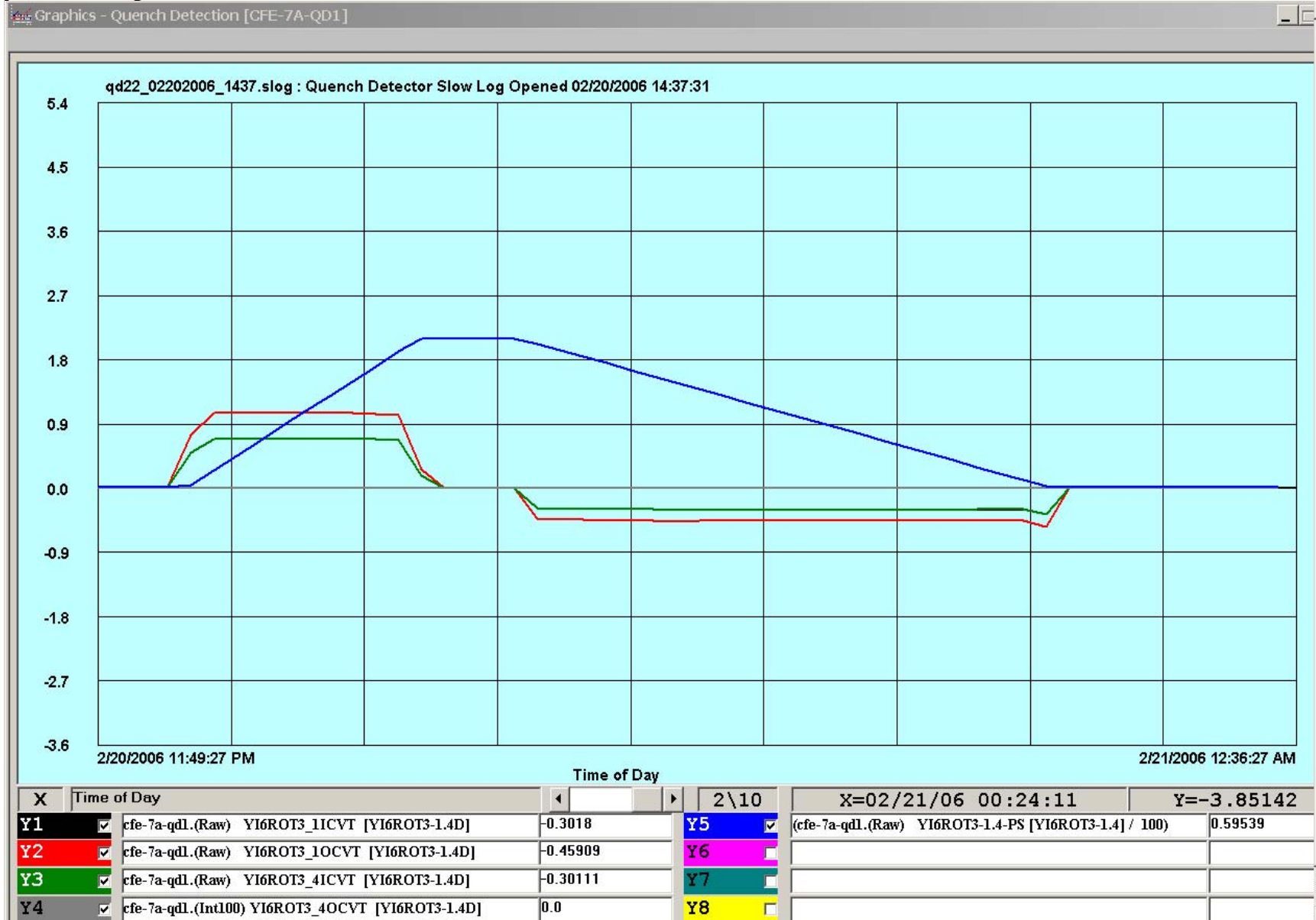
# Bo6-rot3-1.4-ps



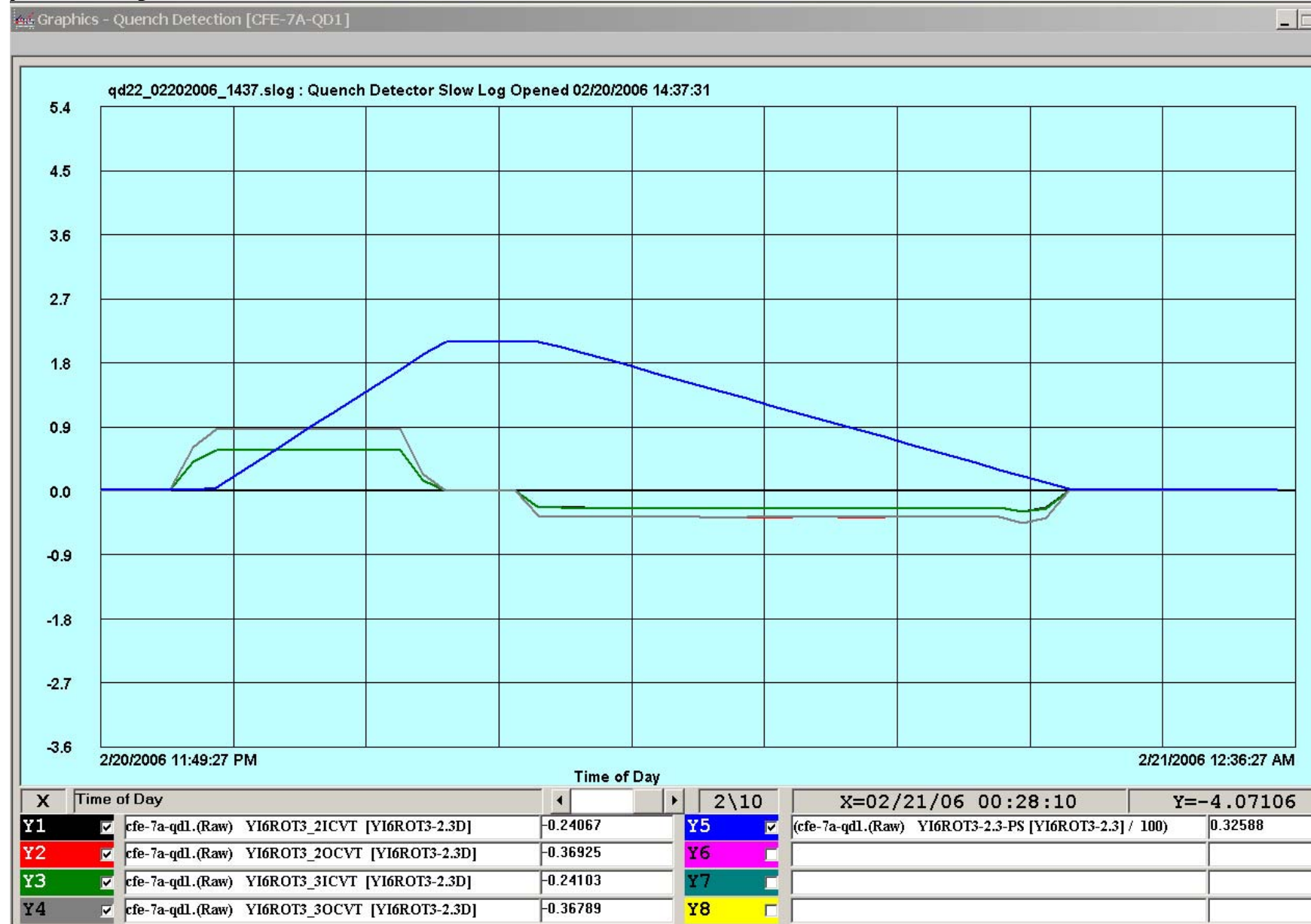
# bo6-rot3-2.3-ps



# yi6-rot3-1.4-ps

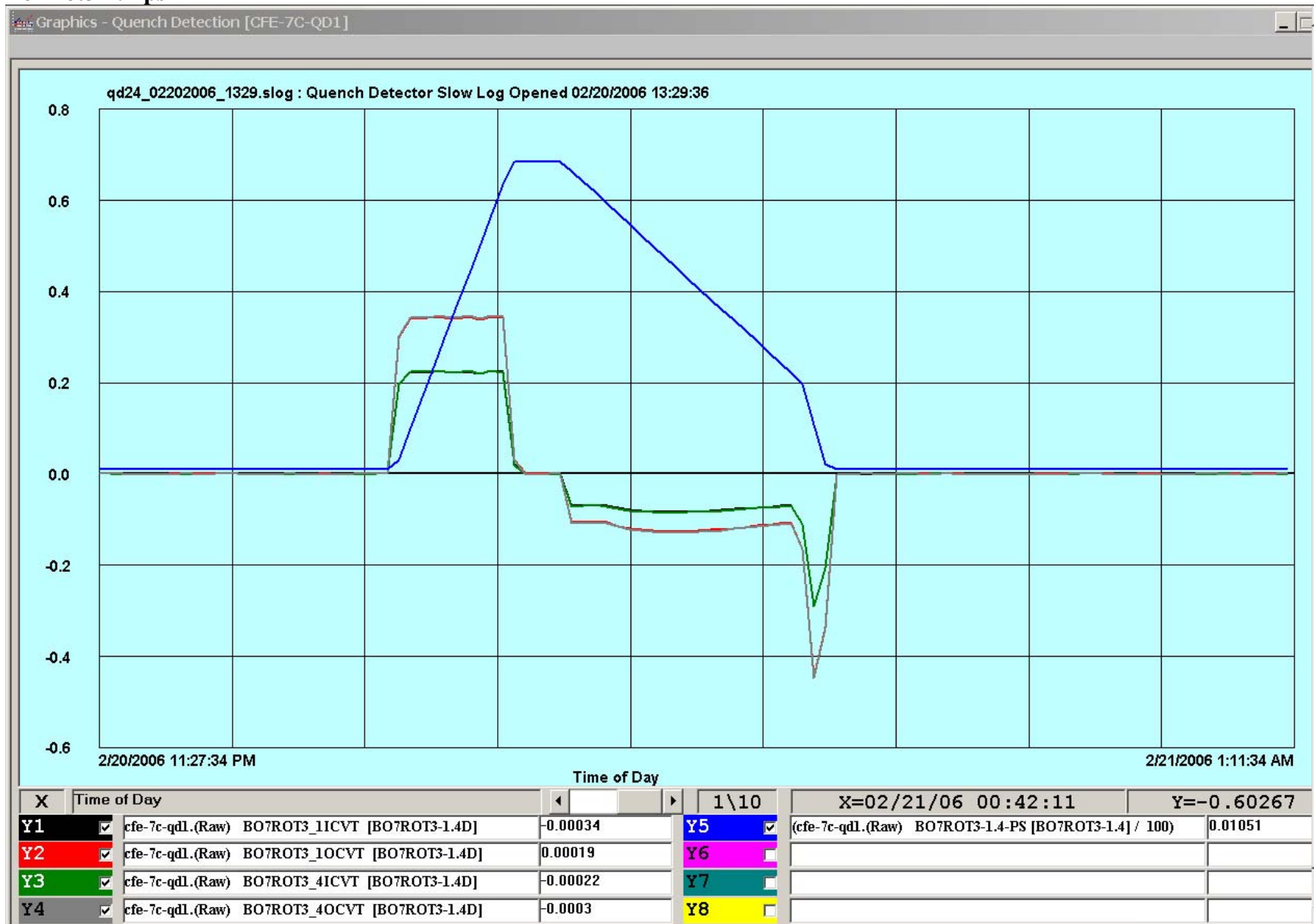


# yi6-rot3-2.3-ps

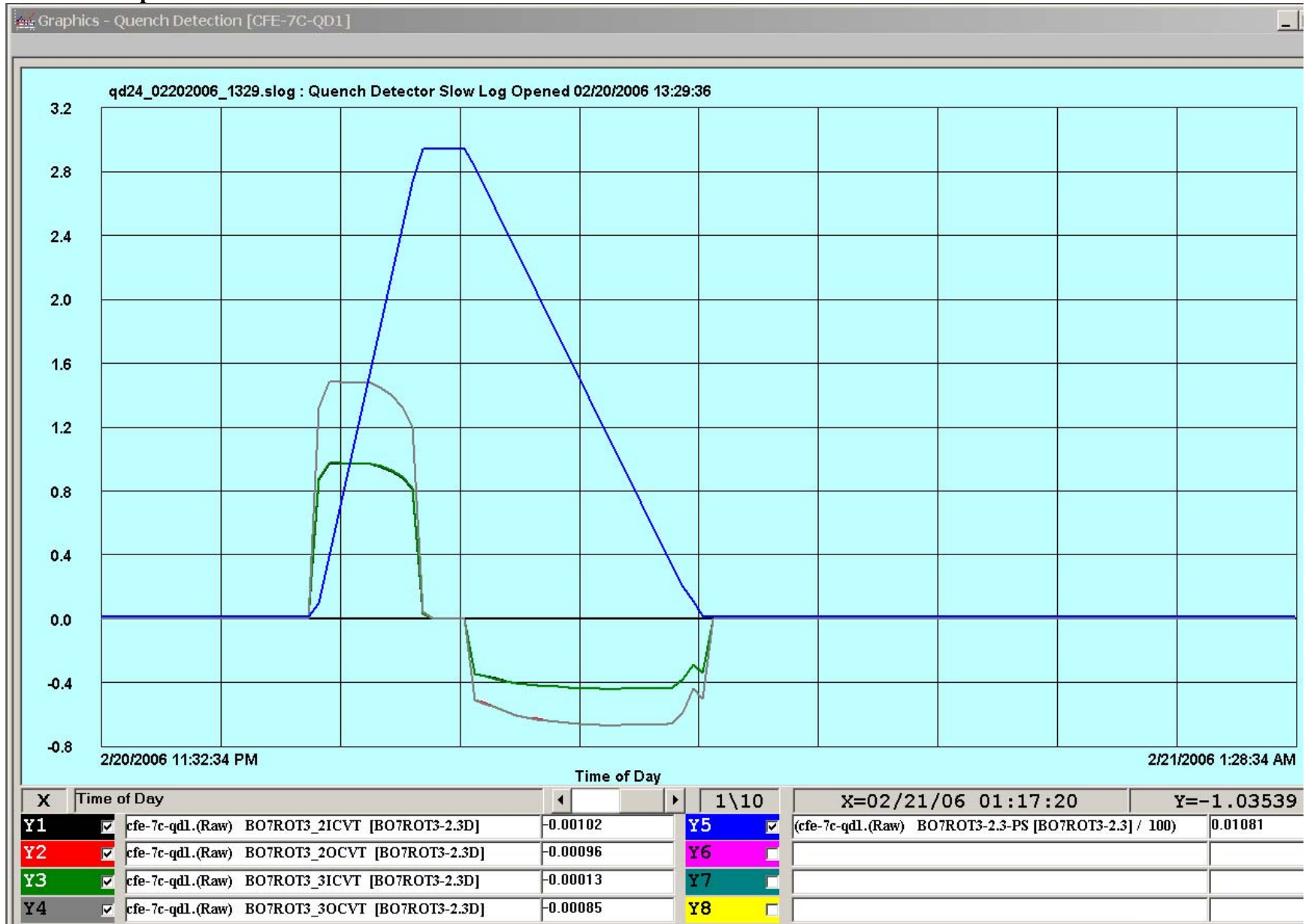


## **Alcove 7C-Slow Logs**

# Bo7-rot3-1.4-ps

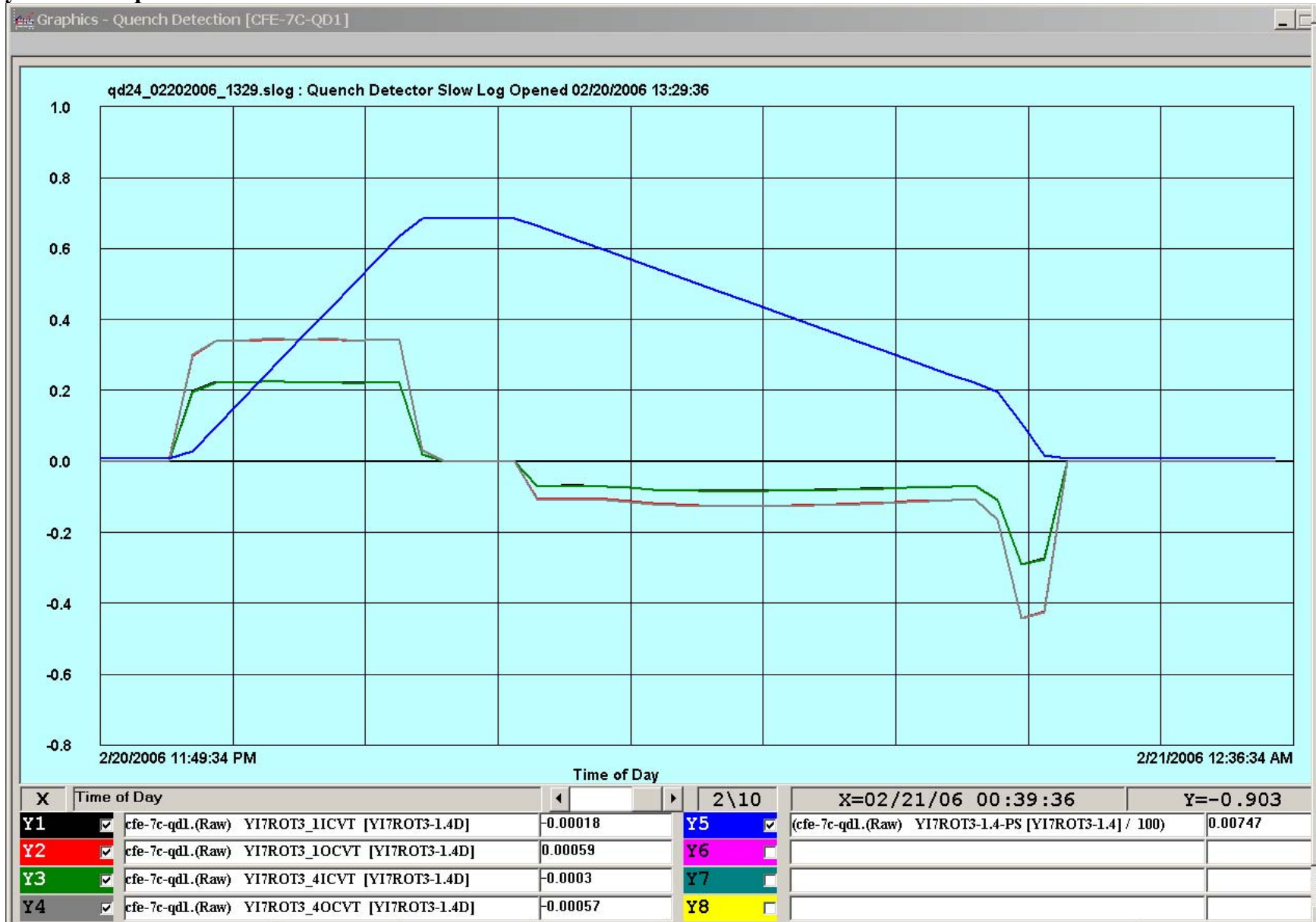


# bo7-rot3-2.3-ps

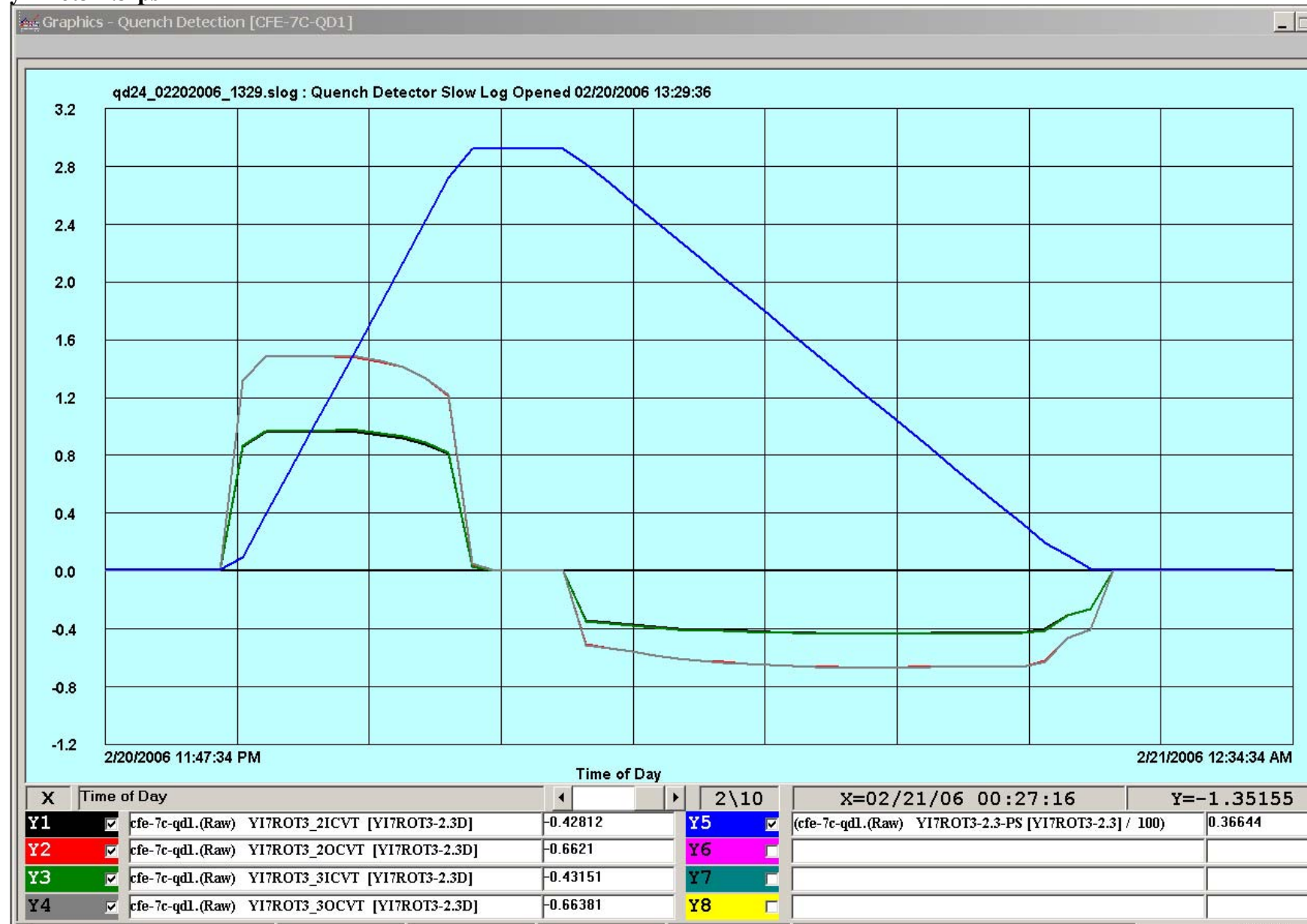




# yi7-rot3-1.4-ps

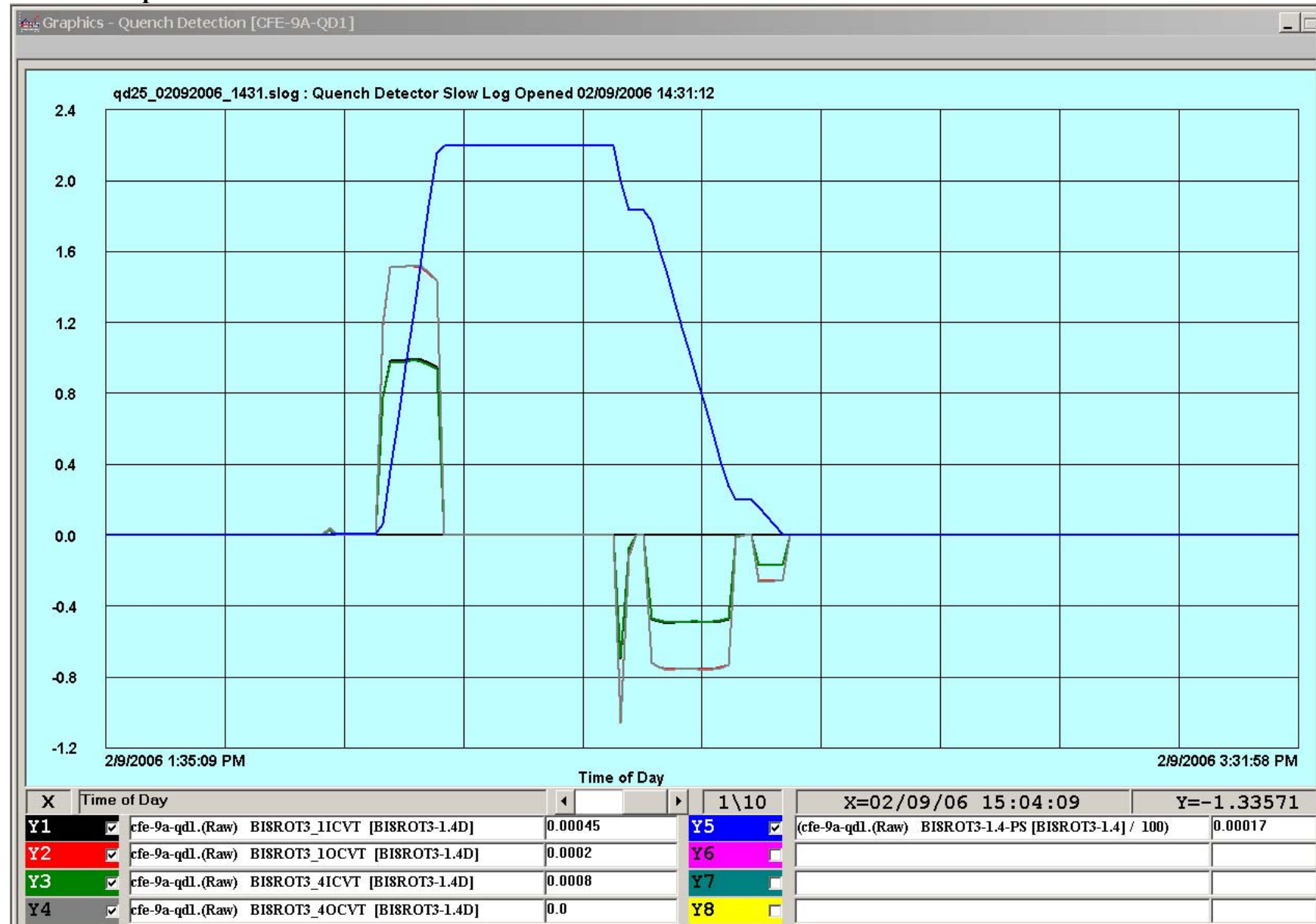


# yi7-rot3-2.3-ps

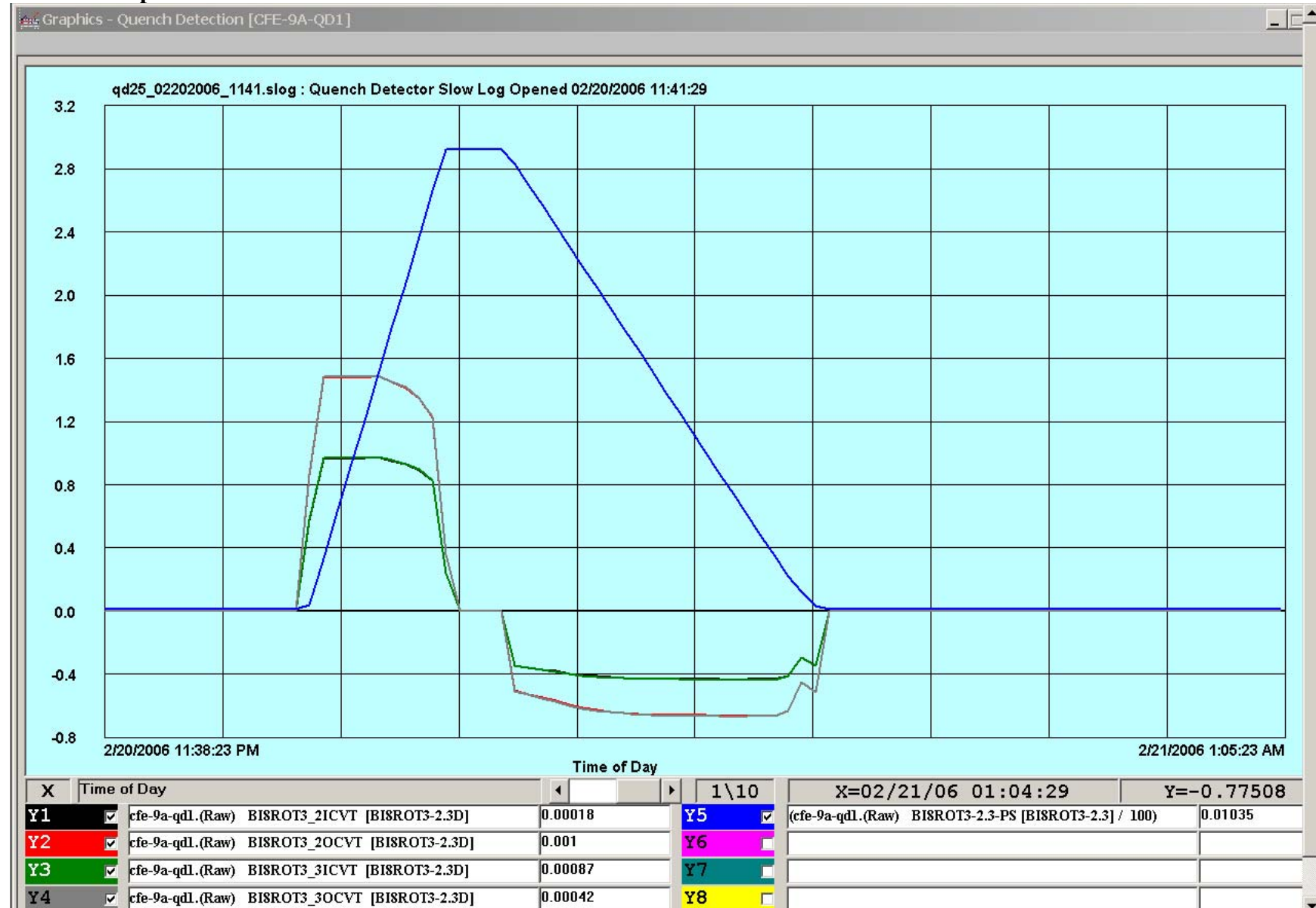


## **Alcove 9A-Slow Logs**

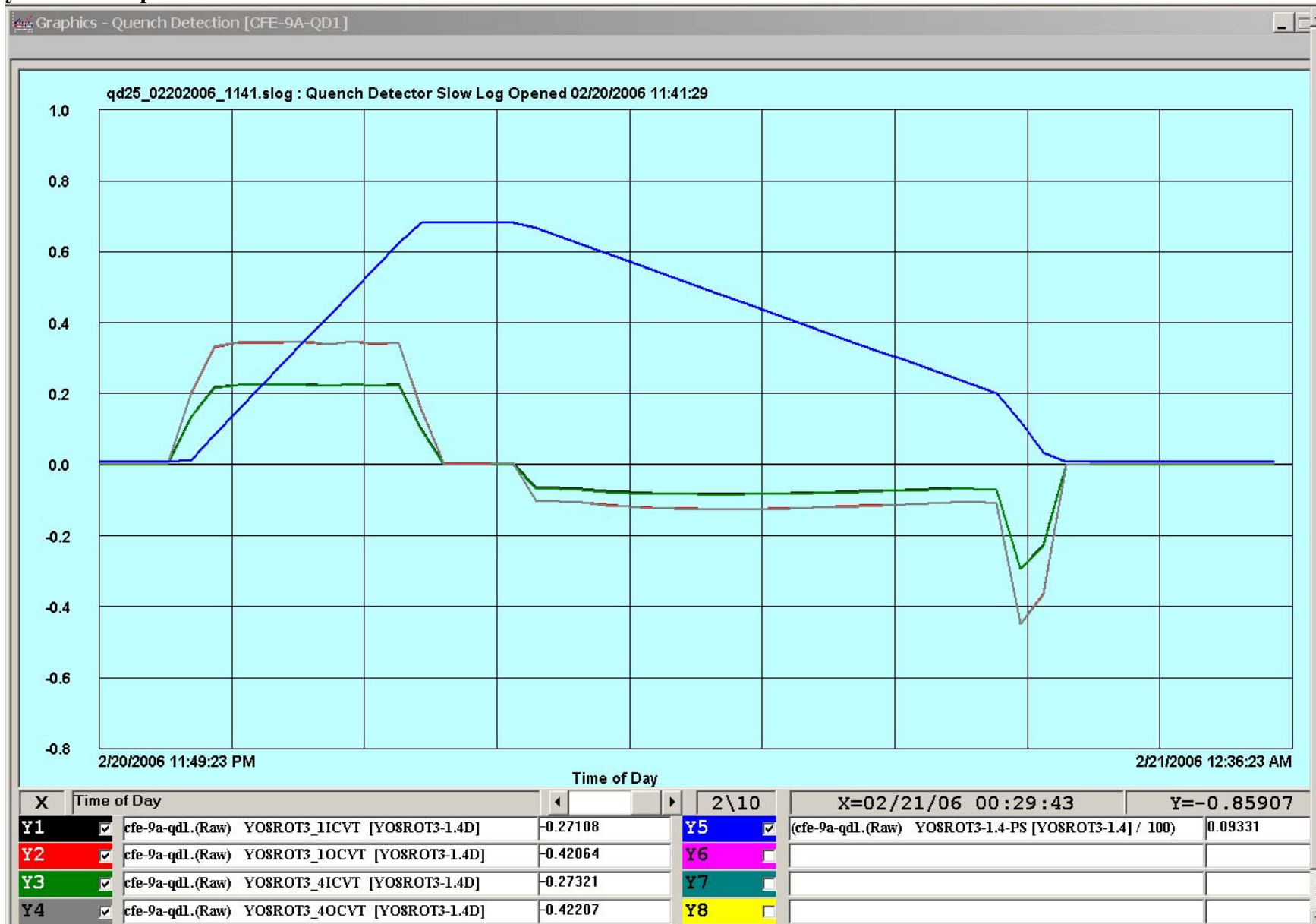
# Bi8-rot3-1.4-ps

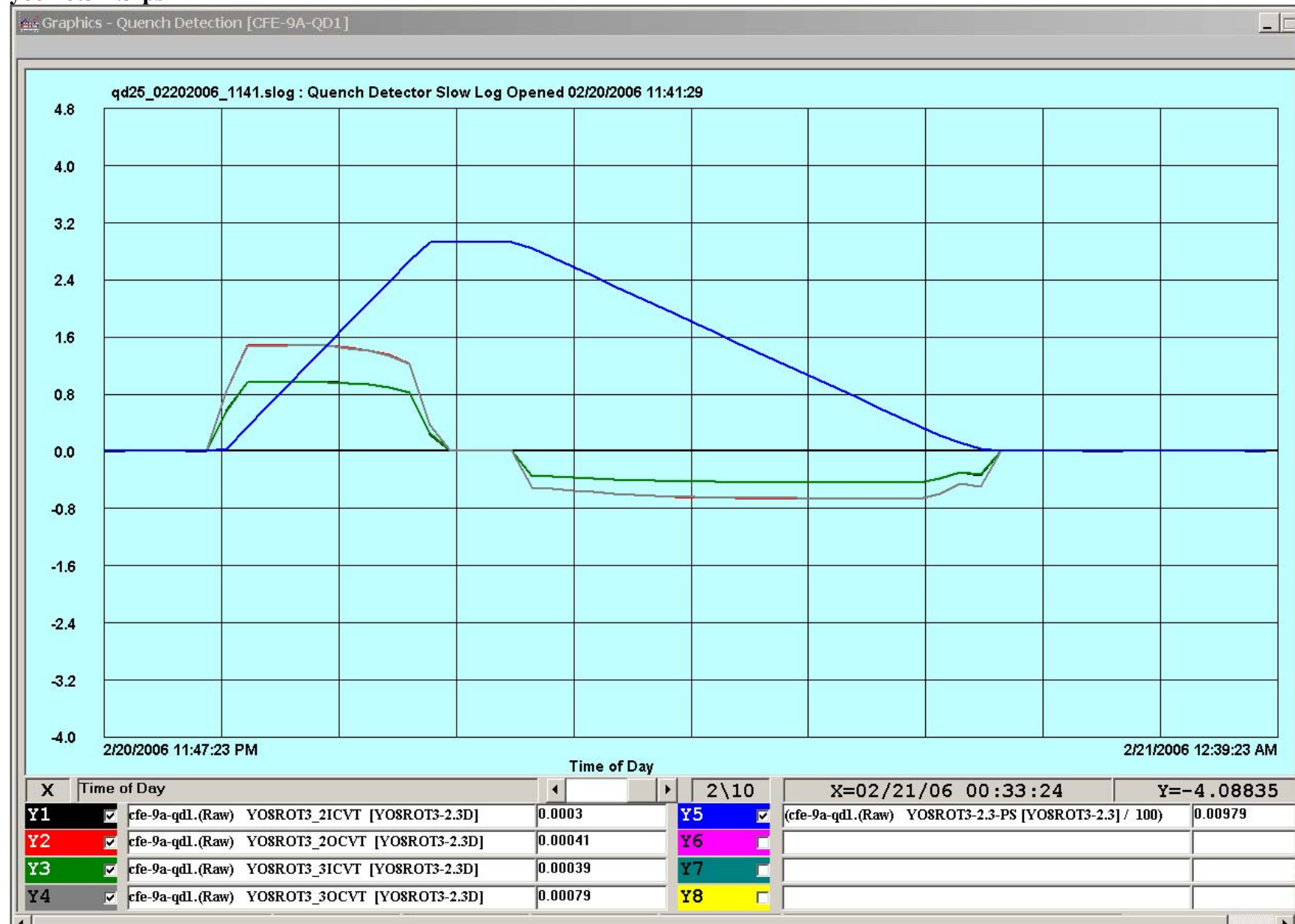


# bi8-rot3-2.3-ps



# yo8-rot3-1.4-ps

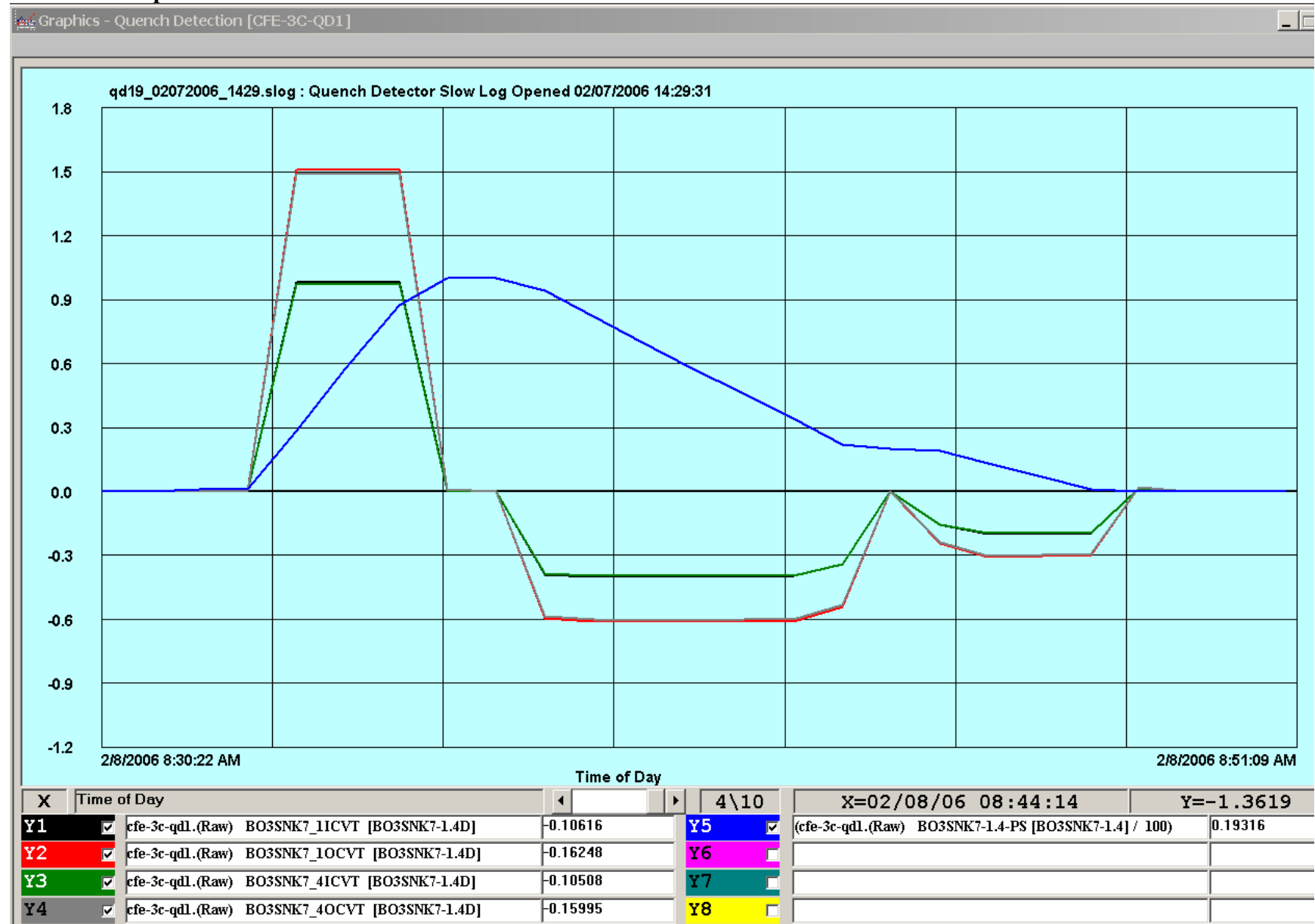




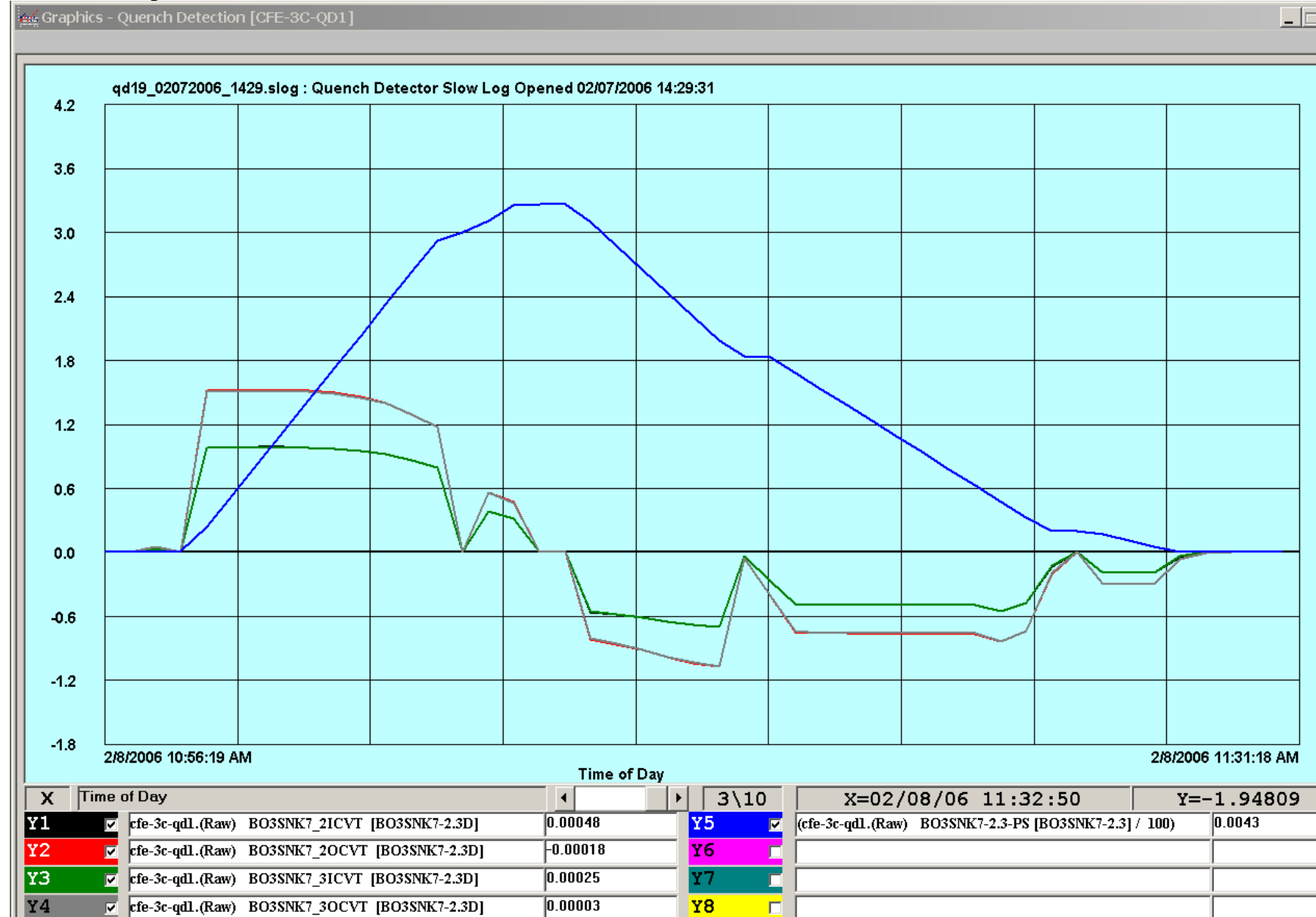
## **Alcove 3C-Slow Logs**



# Bo3-snk7-1.4-ps

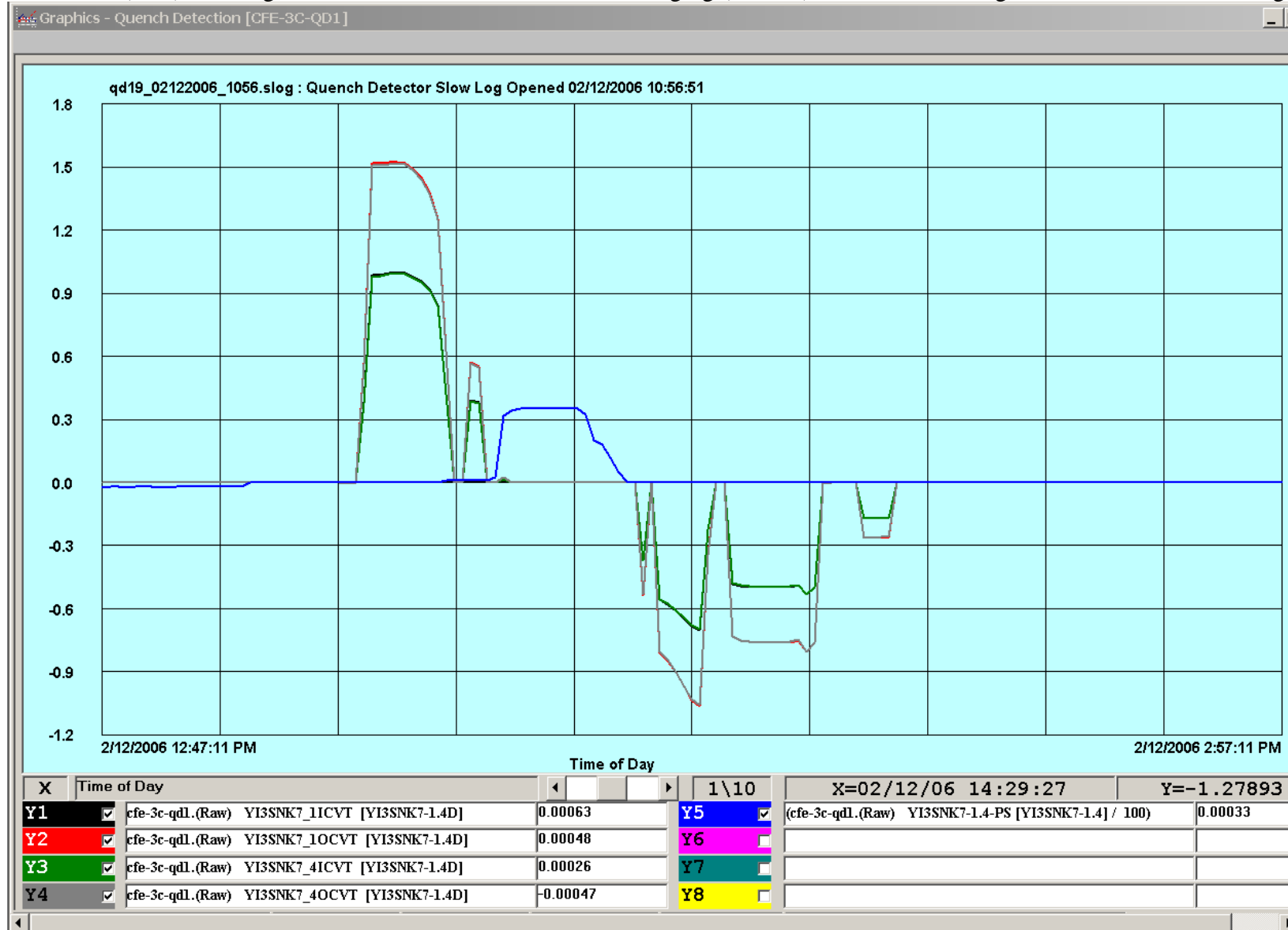


# bo3-snk7-2.3-ps



### yi3-snk7-1.4-ps Example of a problem

I don't have any slow log plots to show for yi3-snk7-1.4 or yi3-snk7-2.3 because they were not correct in the quench detection data base this year. There were fixed on 2/22/06 but I don't have slow log data for when they were ramped one at a time. I can show what a problem looks like though because of this. The current (blue) and coil voltage taps should not look like. Observe there is voltage when the current (blue) is sitting at zero or when the current is not changing ( $di/dt=0$ ). There is no voltage when the current is changing.



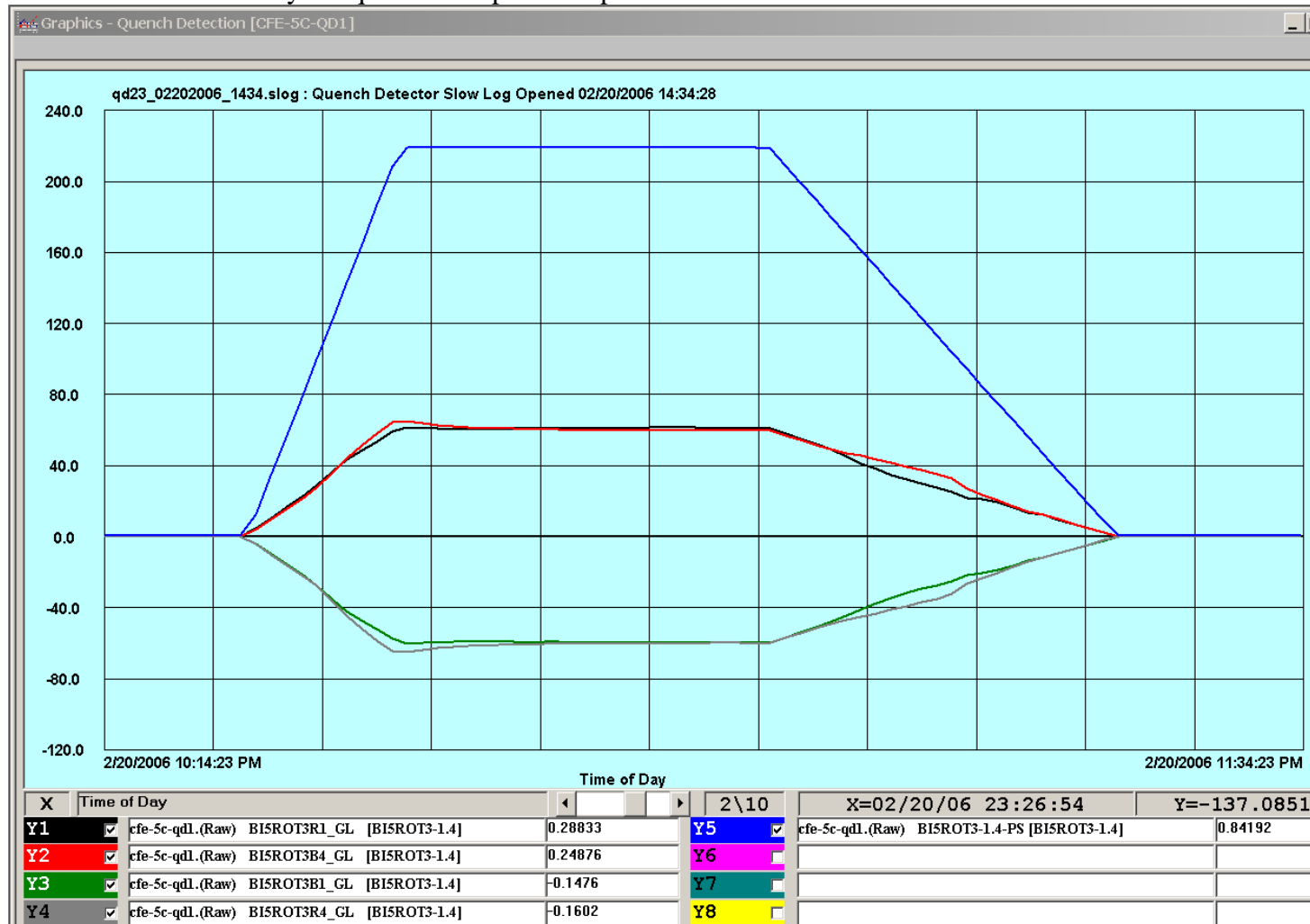
## **Alcove 9C-Slow Logs**

**Bi9-snk7-1.4-ps, bi9-snk7-2.3-ps, yo9-snk7-1.4-ps, yo9-snk7-2.3-ps**

I don't have slow log data for these because either the slow logs were not on or the slow log data I have is only when both were ramping to high current at the same time. Check slow logs 2/5/06-2/10/06.

**An example of what Gas cooled leads look like on Slow Logs for bi5-rot3-1.4-ps.** Here we are looking at bi5-rot3-1.4 gas cooled leads as an example. See the way they act like a resistor. The current goes up, the voltage on the gas cooled lead goes up. The current flattens out and the voltage on the gas cooled lead flattens out and sits at a DC level. Using the rules form page 2,

- the B1 and R1 gas cooled leads are opposite sign but equal and increasing only as you are ramping up in current.
- the B4 and R4 gas cooled leads are opposite sign but equal and increasing only as you are ramping up in current
- When you ramp down the p.s. the gas cooled leads should follow, check this too.
- You should also watch that the voltage on the gas cooled leads are not slowly, or quickly, drifting up, when you are sitting at a fixed current. This could indicate a lead flow problem. If the flow is low the voltage would climb and eventually the qd would trip out the p.s.



**An example of what Gas cooled leads look like on Slow Logs for bo3-snk7-1.4-ps.** Here we are looking at bo3-snk7-1.4 gas cooled leads as an example. See the way they act like a resistor. The current goes up, the voltage on the gas cooled lead goes up. The current flattens out and the voltage on the gas cooled lead flattens out and sits at a DC level. Using the rules from page 2,

- the B1 and R1 gas cooled leads are opposite sign but equal and increasing only as you are ramping up in current.
- the B4 and R4 gas cooled leads are opposite sign but equal and increasing only as you are ramping up in current
- When you ramp down the p.s. the gas cooled leads should follow, check this too.
- You should also watch that the voltage on the gas cooled leads are not slowly, or quickly, drifting up, when you are sitting at a fixed current. This could indicate a lead flow problem. If the flow is low the voltage would climb and eventually the qd would trip out the p.s.

